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DRAFT
Program Environmental Impact Report
General Plan Update, Zoning Code Amendments, and Climate Action Plan
City of South San Francisco, San Mateo County, California

State Clearinghouse Number 2021020064

Prepared for:
City of South San Francisco
315 Maple Avenue
South San Francisco, CA 94080
650.877.8535

Contact: Billy Gross, Senior Planner

Prepared by:
FirstCarbon Solutions
1350 Treat Boulevard, Suite 380
Walnut Creek, CA 94597
925.357.2562

Contact: Mary Bean, Project Director
Lisa Davison Project Manager

Date: June 24, 2022

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius (Centigrade)
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACHP	Advisory Council on Historic Preservation
ACM	asbestos-containing material
ACP	Alternative Compliance Plan
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
ADU	accessory dwelling unit
AEP	Association of Environmental Professionals
AFY	acre-feet/year
AIA	Airport Influence Area
AIC	Archaeological Information Center
AICUZ	Air Installation Compatibility Use Zone
AIRFA	American Indian Religious Freedom Act
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
APCD	Air Pollution Control District
APE	Area of Potential Effect
APN	Assessor's Parcel Number
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
ARPA	Archaeological Resources Protection Act
AST	aboveground storage tank
ATCM	Airborne Toxic Control Measures
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BART	Bay Area Rapid Transit
BAU	Business as Usual
BAWSCA	Bay Area Water Supply and Conservation Agency
BCDC	San Francisco Bay Conservation and Development Commission

BCF	billion cubic feet
BCF/year	billion cubic feet per year
BIOS 5	Biogeographic Information Observation System
BMP	Best Management Practice
BTEX	benzene, toluene, ethylbenzene, and xylene
BVOC	biogenic volatile organic compound
C/CAG	City/County Associations of Governments
C^2ES	Center for Climate and Energy Solution
C_3H_4O	acrolein
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
Cal Water	California Water Service
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Health and Safety Administration
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARE	Community Air Risk Evaluation
CBC	California Building Standards Code
CCCC	California Climate Change Center
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERT	Community Emergency Response Team
CESA	California Endangered Species Act
CFC	chlorofluorocarbon
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH_4	methane
CHL	California Historical Landmarks
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System

CIP	Capital Improvement Program
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNPSEI	California Native Plant Society Electronic Inventory
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
CPHI	California Points of Historical Interest
CPUC	California Public Utilities Commission
CRA	Cultural Resources Assessment
CRHR	California Register of Historical Resources
CTR	California Toxics Rule
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CWPP	Community Wildfire Protection Plan
dB	decibel
dBA	A-weighted decibel
DBH	diameter at breast height
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
du	dwelling unit
du/acre	dwelling unit per acre
DWR	California Department of Water Resources
EDD	California Employment Development Department
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act of 2007
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	United States Environmental Protection Agency
ES	Environmental Studies
EV	electric vehicle
FAA	Federal Aviation Administration
FAR	floor area ratio
FCS	FirstCarbon Solutions
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone

FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
GHG	greenhouse gas
gpd	gallons per day
gpm	gallons per minute
GPS	Global Positioning System
GWh	gigawatt-hours
GWh/y	gigawatt-hours per year
GWP	global warming potential
HAP	Hazardous Air Pollutant
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HERO	Human and Ecological Risk Office
HFC	hydrofluorocarbon
HMBP	Hazardous Materials Business Plans
HMP	Habitat Management Plan
HOV/HOT	High Occupancy Vehicle/High Occupancy Toll
HRA	Health Risk Assessment
HRI	California Historic Resources Inventory
HSCWP	Hot Spot Cleaning Work Plan
HVAC	heating, ventilation, and air conditioning
HWCL	Hazardous Waste Control Law
IADZ	Inner Approach/Departure Zone
ICDB	Information Center Database
IIJA	Infrastructure Investment and Jobs Act
IPaC	Information for Planning and Consultation
IPCC	United Nations Intergovernmental Panel on Climate Change
ISO	Independent System Operator
ISTEA	Intermodal Surface Transportation Efficiency Act
ITZ	Inner Turning Zone
IWMP	Integrated Waste Management Plan
JPB	Joint Power Board
kBTU	kilo-British Thermal Units
kW	kilowatts
LAFCo	Local Agency Formation Committee
LBP	lead-based paint
LCFS	Low Carbon Fuel Standard

L_{dn}	day/night average sound level
LED	light-emitting diode
LEED™	Leadership in Energy and Environmental Design
L_{eq}	equivalent sound level
LEV	Low Emission Vehicle
LHMP	Local Hazard Mitigation Plan
LID	Low Impact Development
LOS	Level of Service
LRA	Local Responsibility Area
LSE	load-serving entities
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
MG	million gallons
MGD	million gallons per day
MMI	Modified Mercalli Intensity
MMRP	Mitigation Monitoring and Reporting Program
MMT	million metric tons
MOU	Memorandum of Understanding
mph	miles per hour
MPO	Metropolitan Planning Organization
MRP	Municipal Regional Permit
MRZ	Mineral Resource Zone
MS4	Multiple Separate Storm Sewer Systems
MSDS	Material Safety Data Sheets
MT	metric tons
MTBE	methyl tert-butyl ether
MTC	Metropolitan Transportation Commission
MTS	Metropolitan Transportation System
MW	megawatt
MWD	Metropolitan Water District of Southern California
MXD	mixed-use development
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NAP	naphthalene
NASA	National Aeronautics and Space Administration
NCCWD	North Coast County Water District

NDC	nationally determined contribution
NEHRP	National Earthquake Hazards Reduction Program
NEM	Noise Exposure Map
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NHM	Natural History Museum of Los Angeles County
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NOAA Fisheries	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOC	Notice of Completion
NOI	Notice of Intent
NOP	Notice of Preparation
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NTR	National Toxics Rule
NWIC	Northwest Information Center
O_3	ozone
OADZ	Outer Approach/Departure Zone
OAL	Office of Administrative Law
OEHHA	California Office of Environmental Health Hazard Assessment
OHWM	ordinary high water mark
ONAC	Federal Office of Noise Abatement and Control
OPR	Governor’s Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PAH	Polycyclic Aromatic Hydrocarbons
Pb	lead
PCB	polychlorinated biphenyl
PCE	tetrachloroethylene
pCi/L	picocuries per liter
PDA	Priority Development Area
PDR	production, distribution, service, and repair

PFC	perfluorocarbon
PG&E	Pacific Gas and Electric Company
Phase I ESA	Phase I Environmental Site Assessment
PM_{10}	particulate matter, including dust, 10 micrometers or less in diameter
$PM_{2.5}$	particulate matter, including dust, 2.5 micrometers or less in diameter
PM_x	particulate matter
ppb	parts per billion
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
PV	photovoltaics
PVC	polyvinyl chloride
RCRA	Resource Conservation and Recovery Act
Recology	Integrated Resource Recovery Company
RecycleSmart	Central Contra Costa County Solid Waste Authority
REL	Reference Exposure Level
RFP	Request for Proposal
RHNA	Regional Housing Needs Assessment
RMP	Risk Management Plan
rms	root mean square
ROG	reactive organic gases
RPS	Renewables Portfolio Standard
RWQCB	Regional Water Quality Control Board
RWS	Regional Water System
SAFE	Safer Affordable Fuel-Efficient
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCH	State Clearinghouse
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SFBAAB	San Francisco Bay Area Air Basin
SFO	San Francisco International Airport
SFPUC	San Francisco Public Utilities Commission
SLR	Sea Level Rise
SMCEH	San Mateo County Environmental Health
SMCWPPP	San Mateo Countywide Water Pollution Prevention Program
SO_2	sulfur dioxide

SOI	Sphere of Influence
SPCC	Spill Prevention, Control, and Countermeasure
SR	State Route
SRA	State Responsibility Area
SSFFD	South San Francisco Fire Department
SSFHRA	South San Francisco Homestead and Railroad Association
SSFLIC	South San Francisco Land and Improvement Company
SSFPD	South San Francisco Police Department
SSFUSD	South San Francisco Unified School District
SSMP	Sewer System Management Plan
State Water Board	California State Water Resources Control Board
STC	Sound Transmission Class
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TAC	toxic air contaminants
TCE	trichloroethylene
TCM	transportation control measures
TCR	Tribal Cultural Resources
TDM	Transportation Demand Management
TDS	total dissolved solids
TDV	Time Dependent Valuation
TEA-21	Transportation Equity Act for the 21st Century
Tg	teragram
therms/y	therms per year
TIA	Traffic Impact Analysis
TIS	Traffic Impact Study
TMA	Transportation Management Association
TMDL	Total Maximum Daily Load
TOD	Transit Oriented Development
TPH	Total Petroleum Hydrocarbons
TTLC	Total Threshold Limit Concentration
UBC	Uniform Building Code
UCMP	University of California Museum of Paleontology
UNFCCC	United Nations Framework Convention on Climate Change
US-101	U.S. Highway 101
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture

USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UWMP	Urban Water Management Plan
V/C	volume to capacity ratio
Valley Air District	San Joaquin Valley Air Pollution Control District
VDECS	Verified Diesel Emission Control Strategies
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	Vehicle Miles Traveled
VOC	volatile organic compounds
VTA	Santa Clara Valley Transportation Authority
WATERS	EPA Watershed Assessment, Tracking, and Environmental Results System
WDR	Waste Discharge Requirement
WELO	Water Efficient Landscape Ordinance
WETA	Water Emergency Transportation Authority
WQCP	Water Quality Control Plant
WQMP	Water Quality Management Plan
WRI	World Resources Institute
WSA	Water Supply Assessment
WSIP	Water System Improvement Plan
WUCOLS	Water Use Classification of Landscape Species
WUI	wildland urban interface
WWD	Westborough Water District
WWTP	Wastewater Treatment Plant
ZEV	Zero-Emission Vehicle

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EXECUTIVE SUMMARY

Purpose

This Draft Program Environmental Impact Report (Draft Program EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the proposed South San Francisco General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project) (State Clearinghouse No. 2021020064). This document is prepared in conformance with CEQA (Public Resources Code [PRC] § 21000, *et seq*.) and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, § 15000, *et se*q.).

The purpose of this Draft Program EIR is to inform decision makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from implementation of the proposed project. This Draft Program EIR describes potential impacts relating to a wide variety of environmental issues and methods by which these impacts can be mitigated or avoided.

Project Summary

Project Location

The City of South San Francisco is in northern San Mateo County, California (Exhibit 2-1). The City encompasses approximately 31 square miles and has a population of 67,135[1] people. South San Francisco is bound by the City of Brisbane and San Bruno Mountain to the north, San Francisco Bay to the east, the City of San Bruno to the south, and Daly City, the City of Pacifica, the Town of Colma, and the Pacific Coast Ranges to the west (Exhibit 2-2). The San Francisco International (SFO) Airport is located immediately to the south but falls within the City and County of San Francisco's jurisdictional boundaries.

Project Description

The proposed project includes the implementation of the the South San Francisco General Plan Update, Zoning Code Amendments, and Climate Action Plan which are collectively referred to as the proposed project in this document.

The General Plan Update anticipates approximately 14,312 net new housing units and approximately 42,297 net new employment opportunities by 2040. The Proposed Land Use Map designates the general location, distribution, and extent of land uses within the Planning Area and identifies proposed land use designations for each parcel within the City of South San Francisco and within the City's SOI.

[1] California Department of Finance. 2021. Population Estimate for Cities, Counties, and the State with Annual Percentage Change–January 1, 2020, and 2021. Website: http://dof.ca.gov/Forecasting/Demographics/Estimates/E-1/. Accessed January 29, 2022.

The proposed project includes amendments to the Zoning Code necessary to implement the General Plan Update. The Zoning Code Amendments also incorporate a number of major policies from documents that were previously adopted.

The updated 2022 Climate Action Plan (CAP) includes a community-wide inventory of greenhouse gas (GHG) emissions and identifies strategies and measures to reduce GHG emissions generated by existing and future uses in the City.

Refer to Chapter 2, Project Description, for a complete description of the proposed project.

Project Objectives

For the purpose of this Draft Program EIR analysis, the following objectives have been identified for the proposed project:

- Reflect the current goals and vision expressed by South San Francisco residents, businesses, decision-makers, and other stakeholders.
- Address issues and concerns identified by South San Francisco residents, businesses, decision-makers, and other stakeholders.
- Provide affordable, safe, attractive, amenity-rich neighborhoods, balancing housing options with commercial and employment access.
- Ensure that high-quality and accessible services, facilities, and amenities are available for residents at all stages of their lives, such as internet connectivity, parks and open spaces, emergency response services, and educational and recreational opportunities.
- Provide a safe, convenient, and accessible transportation network that is well-connected to the region by ensuring that streets have accessible alternate transportation for all ages and abilities.
- Build a resilient community that is prepared for the future effects of climate change and natural disasters by prioritizing resources for the City's most vulnerable residents and investing in climate pollution reduction, efficient energy and water use, and clean air.
- Foster a prosperous downtown and local economy by supporting local businesses and strengthening the City's role as the worldwide hub of the biotech and life sciences.
- Make the downtown a destination for all by providing a diversity of uses as well as improving walkability, safety, and visual interest.
- Embrace the City's legacy as "The Industrial City" and maintain a core of middle-wage jobs in the City.
- Identify strategies and measures to reduce GHG emissions generated by existing and future uses in the City.
- Update the Zoning Code to reflect the shared vision of the new General Plan and implement its new policies that reflect and preserve community character, respond to economic realities

and trends, facilitate reinvestment in the community and development of housing for all segments, and encourage appropriate use of land.

- Address new requirements of State law.

Significant Unavoidable Adverse Impacts

The proposed project would result in the following significant unavoidable impacts:

- **Project-Level Vehicle Miles Traveled:** The proposed project's Vehicle Miles Traveled (VMT) would result in a significant impact for citywide Total VMT Per Service Population and for Work-Based VMT Per Employee. The proposed project would implement Mitigation Measure (MM) TRANS-1, which would require the City to implement its Transportation Demand Management (TDM) Ordinance as part of the Zoning Code Amendments and parking requirements to reduce project-generated VMT. MM TRANS-1 also requires the City to update its TDM Ordinance and parking requirements every 5 to 10 years and establish an East of 101 Area Trip Cap, to achieve the maximum feasible reductions in vehicle travel. However, even with the implementation of the General Plan Update policies and actions and implementation of MM TRANS-1, because the effectiveness of VMT reduction strategies cannot be quantified in this programmatic analysis, the City of South San Francisco may not achieve the overall VMT threshold reduction level and the impact would remain significant and unavoidable.
- **Project-Level Roadway Safety:** Implementation of the proposed project would increase vehicle trips on the City's freeway ramps, which would cause vehicle queues to exceed offramp storage capacity or exacerbate offramps that already experience offramp queues exceeding storage capacity, resulting in a potentially significant impact. The proposed project would implement MM TRANS-4, which would require the City to work with the California Department of Transportation (Caltrans) to develop improvement measures for freeway offramps and adjacent intersections that help manage offramp queues to minimize queueing hazards. MM TRANS-1 is also applicable and would be implemented to minimize freeway offramp queues. However, even with the implementation of General Plan Update policies and actions and implementation of MM TRANS-4 and MM TRANS-1, given the uncertainty around specific operational conditions and ability to mitigate such conditions in a constrained right-of-way, this impact remains significant and unavoidable.
- **Cumulative VMT:** Cumulative projects in the nine-county Bay Area may generate new VMT, which would be added to the roadway network within the geographic context. All cumulative projects would be required to comply with County and local ordinances and General Plan policies that address VMT, as well as mitigate their fair share of impacts related to VMT. Nonetheless, the proposed project, in conjunction with other past, present, and future projects, would have a cumulatively significant impact related to VMT. The proposed project would implement MM TRANS-1, which would require the City to implement its TDM Ordinance as part of the Zoning Code Amendments and parking requirements to reduce project-generated VMT. MM TRANS-1 also requires the City to update its TDM Ordinance and parking requirements every 5 to 10 years and establish an East of 101 Area Trip Cap, to achieve the maximum feasible reductions in vehicle travel. However, even with incorporation

of MM TRANS-1 which would partially reduce VMT impacts, the impacts would remain significant and unavoidable. As the proposed project's impacts related to VMT are significant and unavoidable, the proposed project's incremental contribution to the cumulative impact is significant and the proposed project's contribution to cumulative VMT impacts would be cumulatively considerable.

- **Cumulative Roadway Safety:** Cumulative projects in the nine-county Bay Area may generate new VMT, which would be added to the roadway network, potentially increasing vehicle trips on the City's freeway ramps, which would cause vehicle queues to exceed offramp storage capacity or exacerbate offramps that already experience offramp queues exceeding storage capacity. All cumulative projects would be required to mitigate for their impacts, as well as ensure that roadway safety is maintained, and comply with applicable policies in local and regional planning documents. Nonetheless, there would remain a cumulatively significant impact related to roadway safety. The proposed project would implement MM TRANS-4, which would require the City to work with Caltrans to develop improvement measures for freeway offramps and adjacent intersections that help manage offramp queues. Implementation of MM TRANS-1 would also assist in minimizing freeway offramp queues. However, even with incorporation of MM TRANS-4 and MM TRANS-1, the impacts would remain significant and unavoidable. As the proposed project's impacts to the City's freeway ramps are significant and unavoidable, the proposed project's incremental contribution to the cumulative impact is considered significant and the proposed project's contribution to roadway safety cumulative impacts would be cumulatively considerable.
- **Project-Level Conflict with 2017 Bay Area Clean Air Plan:** The VMT growth facilitated by the proposed project would constitute an approximately 94 percent growth through 2040 while population growth facilitated by the proposed project would constitute an approximately 61 percent growth through 2040. The forecasted VMT growth would outpace the forecasted population growth facilitated by the proposed project. Therefore, the proposed project would be considered inconsistent with the 2017 Clean Air Plan. The proposed project would implement MM TRANS-1, which would achieve the maximum feasible reductions in vehicle travel. However, even with the implementation of the General Plan Update policies and actions and implementation of MM TRANS-1, because the effectiveness of VMT reduction strategies cannot be quantified in this programmatic analysis, the City of South San Francisco may not achieve the overall VMT threshold reduction level. As such, this impact would be significant and unavoidable.
- **Project-Level Criteria Air Pollutants:** Because the proposed project's projected VMT growth outpaces projected population growth, the proposed project would result in a cumulatively considerable net increase in criteria pollutants, and this impact would be potentially significant. The proposed project would implement MM TRANS-1, which would achieve the maximum feasible reductions in vehicle travel. However, as there is no reasonable mitigation that could be implemented to increase population projections while keeping VMT growth to a minimum in an area that is already fully urbanized and built out, such as the City of South San Francisco, this impact would remain significant and unavoidable after mitigation.

- **Cumulative Conflict with 2017 Bay Area Clean Air Plan:** Development envisioned by the proposed project would be inconsistent with the 2017 Bay Area Clean Air Plan, since it would facilitate VMT growth which outpaces the forecasted population growth and would therefore result in a cumulatively considerable net increase in criteria air pollutants and ozone precursors, resulting in a conflict with the applicable air quality plan.
- **Cumulative Criteria Air Pollutants:** Because the proposed project would result in a projected VMT growth which outpaces the projected population growth through the planning horizon of 2040, the proposed project would result in a cumulatively considerable net increase in criteria air pollutants and ozone precursors.

Summary of Project Alternatives

Below is a summary of the alternatives to the proposed project considered in Section 5, Alternatives to the proposed project.

Alternative 1–No Project Alternative/1999 General Plan

Under the No Project Alternative/1999 General Plan, the General Plan would not be updated with new policies and no zoning or land use designation changes would occur. Future development would be in accordance with the current land use and zoning maps identified in the 1999 General Plan. The 1999 General Plan provided for development of then-approved projects plus future development of a total of 2,780 housing units and 9 million square feet of nonresidential space to the City's current inventory of an estimated 19,400 housing units and 18.1 million square feet of nonresidential development. The 1999 General Plan estimated a population of 67,400 at projected buildout in 2020. Existing land uses in 2019 include 24,647 residential units and 31,906,205 square feet of commercial/industrial/civic space. Exhibit 4-1 illustrates the existing land use map from the 1999 General Plan. Additionally, under this alternative the Zoning Code would not be updated, and the City would not consider updating the existing Climate Action Plan (CAP). Under this alternative, the current goals, policies, and zoning would remain in place through the horizon year.

Alternative 2–Decreased Employment Alternative

Under the Decreased Employment Alternative, there would be a 25 percent decrease in nonresidential uses in the East of 101, Lindenville, and El Camino subareas to decrease the number of employment opportunities and improve the jobs/housing balance in the City. It is assumed that these decreases would not occur within 0.333 mile of existing transit. This alternative was selected because it would decrease VMT associated with employment and would therefore result in reduced traffic related impacts compared to the proposed project.

Alternative 3–Increased Residential Alternative

This alternative would propose an increase in residential development along the El Camino Real transit corridor through increased density zoning (see Exhibit 4-2). This alternative would result in an increase in approximately 500 dwelling units compared to the proposed project. An additional 3,017 residential units would be added to this area (compared to the 2,524 units under the proposed project).Approximately 95 acres of what is now proposed as Medium-Density Mixed Use along El

Camino Real and around the Bay Area Rapid Transit (BART) station would be designated as High-Density Mixed Use, resulting in a change in maximum allowable density from 120 dwelling units per acre to 180 dwelling units per acre. Maximum building heights for these parcels would increase from 85 feet to 120 feet. This alternative was selected because it would reduce the jobs to housing imbalance; thereby reducing VMT impacts associated with commuting compared to the proposed project.

Areas of Controversy

Pursuant to CEQA Guidelines Section 15123(b), a summary section must address areas of controversy known to the lead agency, including issues raised by agencies and the public, and it must also address issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects.

A Notice of Preparation (NOP) for the proposed project was issued on February 3, 2021. The NOP describing the original concept for the project and issues to be addressed in the EIR was distributed to the State Clearinghouse, responsible agencies, and other interested parties for a 30-day public review period extending from February 3, 2021, to March 22, 2021.

A revised NOP was circulated from January 14, 2022, to February 28, 2022, to provide the public with an opportunity to comment on changes that were made to the Project Description related to net new housing units and net new employment opportunities anticipated under the General Plan Update. A Scoping Meeting was held on January 31, 2022, which was attended by one member of the public. The NOP identified the potential for significant impacts on the environment related to the following topical areas:

- Aesthetics, Light, and Glare
- Air Quality
- Biological Resources
- Cultural and Tribal Cultural Resources
- Energy
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population, Housing, and Employment
- Public Services and Recreation
- Transportation
- Utilities and Service Systems
- Wildfire

Disagreement Among Experts

This Draft EIR contains substantial evidence to support all the conclusions presented herein. It is possible that there will be disagreement among various parties regarding these conclusions, although the City of South San Francisco is not aware of any disputed conclusions at the time of this writing. Both the CEQA Guidelines and case law clearly provide the standards for treating disagreement among experts.

Where evidence and opinions conflict on an issue concerning the environment, and the lead agency knows of these controversies in advance, the EIR must acknowledge the controversies, summarize

the conflicting opinions of the experts, and include sufficient information to allow the public and decision makers to make an informed judgment about the environmental consequences of the proposed project.

Potentially Controversial Issues

Below is a list of potentially controversial issues that may be raised and may need to be resolved during the public review and hearing process of this Draft EIR:

- Land Use
- Transportation and Traffic
- Greenhouse Gases and Air Quality
- Consistency with Existing Plans

It is also possible that evidence will be presented during the 45-day, statutory Draft EIR public review period that may create disagreement. Decision makers would consider this evidence during the public hearing process.

In rendering a decision on a project where there is disagreement among experts, the decision makers are not obligated to select the most environmentally preferable viewpoint. Decision makers are vested with the ability to choose whatever viewpoint is preferable and need not resolve a dispute among experts. In their proceedings, decision makers must consider comments received concerning the adequacy of the Draft EIR and address any objections raised in these comments. However, decision makers are not obligated to follow any directives, recommendations, or suggestions presented in comments on the Draft EIR, and can certify the Final EIR without needing to resolve disagreements among experts.

Public Review of the Draft Program EIR

Upon completion of the Draft Program EIR, the City of South San Francisco filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (PRC § 21161). Concurrent with the NOC, this Draft Program EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft Program EIR in accordance with Public Resources Code 21092(b)(3). During the public review period, the Draft Program EIR, including the technical appendices, is available for review at the City of South San Francisco offices:

Planning Division
315 Maple Avenue
South San Francisco, CA 94080

City Clerk
400 Grand Avenue
South San Francisco, CA 94080

Main Library
840 West Orange Avenue
South San Francisco, CA 94080

Grand Avenue Library
306 Walnut Avenue
South San Francisco, CA 94080

Agencies, organizations, and interested parties have the opportunity to comment on the Draft Program EIR during the 45-day public review period. Written comments on this Draft Program EIR should be addressed to:

City of South San Francisco
Planning Division
Billy Gross, Principal Planner
315 Maple Avenue
South San Francisco, CA 94080
Phone: 650.877.8535
Email: billy.gross@ssf.net

Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged. Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared and made available for review by the commenting agencies at least 10 days prior to the public hearing before the City of South San Francisco on the project, at which the certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision makers for the project.

Executive Summary Matrix

Table ES-1 below summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed project. The table is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding section of this EIR. Table ES-1 is included in the EIR as required by CEQA Guidelines Section 15123(b)(1).

Table ES-1: Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.1—Aesthetics, Light, and Glare		
Impact AES-1: The proposed project would not have a substantial adverse effect on a scenic vista.	–	N/A
Impact AES-2: The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway.	–	N/A
Impact AES-3: The proposed project is in an urbanized area and would not conflict with applicable zoning and other regulations governing scenic quality.	–	N/A
Impact AES-4: The proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	–	N/A
Section 3.2—Air Quality		
Impact AIR-1: The proposed project would conflict with or obstruct implementation of the applicable air quality plan.	**MM AIR-1a:** Individual development projects facilitated by the proposed project shall incorporate the following Basic Construction Mitigation Measures recommended by the Bay Area Air Quality Management District (BAAQMD): • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 mph. • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.	Significant and unavoidable

Impacts	Mitigation Measures	Level of Significance After Mitigation
	• Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure [ATCM] Title 13, Section 2485 of the California Code of Regulations). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • Prior to the commencement of construction activities, individual project proponents shall post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations. **MM AIR-1b:** Projects that may result in additional toxic air contaminants (TACs) that are located within 1,000 feet of a sensitive receptors(s) or would place sensitive receptors within 1,000 feet of uses generating TACs, such as roadways with volumes of 10,000 average annual daily trips or greater, shall implement Bay Area Air Quality Management District (BAAQMD) Guidelines and California Office of Environmental Health Hazard Assessment (OEHHA) policies and procedures requiring a Health Risk Assessments (HRA) for residential development and other sensitive receptors. Screening area distances may be increased on a case-by-case basis if an unusually large source or sources of hazardous emissions are proposed or currently exist. Based on the results of the HRA, identify and implement measures (such as air filtration systems) to reduce potential exposure to particulate matter, carbon monoxide, diesel fumes, and other potential health hazards. Measures identified in HRAs shall be included into the site development plan as a component of a proposed project. **MM TRANS-1: Transportation Demand Management** To reduce Vehicle Miles Traveled (VMT), the City shall implement its Transportation Demand Management (TDM) Ordinance as part of the Zoning Code Amendments and parking requirements. The City shall also	

Impacts	Mitigation Measures	Level of Significance After Mitigation
	update its TDM Ordinance and parking requirements every five to ten years and establish an East of 101 Area Trip Cap, to achieve the maximum feasible reductions in vehicle travel. The City shall achieve the performance standards outlined in the TDM Ordinance. The City shall update its TDM Ordinance every 5 to 10 years to limit Total VMT and Work-Based VMT by incentivizing use of transit and active transportation and disincentivizing auto use. The TDM Ordinance shall cover all development projects generating greater than 100 daily trips, with the most stringent requirements for office/Research and Development (R&D) land uses that disproportionately account for the highest rates of VMT in the City. Development projects shall implement a combination of TDM programs, services, and infrastructure improvements, including but not limited to: establishing trip reduction programs; subsidizing transit and active transportation use; coordinating carpooling and vanpooling; encouraging telecommuting and flexible work schedules; designing site plans to prioritize pedestrian, bicycle, and transit travel; funding first/last mile shuttle services; establishing site-specific trip caps; managing parking supply; and constructing transit and active transportation capital improvements. Developments shall be subject to annual monitoring. The City shall establish an administrative fine structure for developments found to be out of compliance and apply any revenues from fines to infrastructure and services aimed at reducing VMT. The City shall establish an East of 101 Area Trip Cap to support the monitoring of vehicle trip activity and focus efforts to reduce VMT. The area-wide trip cap shall apply to the high density employment uses in the East of 101 Area. The City shall conduct annual traffic counts along the cordon area perimeter. Should the trip cap be reached, the City shall consider corrective actions such as: revising mode share targets for projects subject to the TDM Ordinance, identifying new funding measures for TDM services, implementing new vehicle user charges, creating new street connections, or slowing the pace of development approvals within the cordon zone. The City shall update its parking requirements every 5 to 10 years to align with its TDM Ordinance and East of 101 Area Trip Cap. The City shall	

Impacts	Mitigation Measures	Level of Significance After Mitigation
	establish parking maximums for office/R&D uses to ensure that VMT reduction goals are incorporated into the design of development projects.	
Impact AIR-2: The proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard.	Implement MM AIR- 1a and MM TRANS-1.	Significant and unavoidable impact.
Impact AIR-3: The proposed project would not expose sensitive receptors to substantial pollutant concentrations.	Implement MM AIR-1b.	Less than significant impact.
Impact AIR-4: The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	MMs AIR-1a, AIR-1b, and TRANS-1.	Significant and unavoidable.
Section 3.3—Biological Resources		
Impact BIO-1: The proposed project could have a substantial adverse effect, either directly 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 the California Department of Fish and Wildlife or United States Fish and Wildlife Service.	**MM BIO-1: Special-status Species, Migratory Birds, and Nesting Birds** Special-status species are those listed as Endangered, Threatened or Rare, or as Candidates for listing by the United States Fish and Wildlife Service (USFWS) and/or California Department of Fish and Wildlife (CDFW), or as Rare Plant Rank 1B or 2B species by the California Native Plant Society (CNPS). This designation also includes CDFW Species of Special Concern and Fully Protected Species. Applicants or sponsors of projects on sites where potential special-status species, migratory birds, or nesting birds are present shall retain a qualified Biologist to conduct a focused survey per applicable regulatory agency protocols to determine whether such species occur on a given project site. The project applicant or sponsor shall ensure that, if development of occupied habitat must occur, species impacts shall be avoided or minimized, and if required by a regulatory agency or the CEQA process, loss of wildlife habitat or individual plants shall be fully compensated on the site. If off-site mitigation is necessary, it shall occur within the South San Francisco Planning Area whenever possible, with a priority given to existing habitat mitigation banks. Habitat mitigation shall be accompanied by a long-term management plan and monitoring program prepared by a qualified Biologist, and include provisions for protection of	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	mitigation lands in perpetuity through the establishment of easements and adequate funding for maintenance and monitoring.	
Impact BIO-2: The proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service.	–	N/A
Impact BIO-3: The proposed project could 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.	**MM BIO-3: Assess Potential Wetland Impacts** Applicants or sponsors of projects on sites where potential jurisdictional wetlands or waterways are present shall retain a qualified Biologist/wetland regulatory specialist to conduct a site investigation and assess whether wetland or waterway features are jurisdictional with regard to the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or California Department of Fish and Wildlife (CDFW). This investigation shall include assessing potential impacts to wetlands and other waters of the United States and/or State. If a feature is found to be jurisdictional or potentially jurisdictional, the project applicant or sponsor shall comply with the appropriate permitting process with each agency claiming jurisdiction prior to disturbance of the feature, and a qualified Biologist/wetland regulatory specialist shall conduct a detailed wetland delineation if necessary.	Less than significant impact.
Impact BIO-4: The proposed project could 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 wildlife nursery sites.	Implement MMs BIO-1 and BIO-3.	Less than significant impact.
Impact BIO-5: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	–	N/A
Impact BIO-6: The proposed project would not conflict with the provisions of an adopted Habitat Conservation	–	N/A

Impacts	Mitigation Measures	Level of Significance After Mitigation
Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan.		
Section 3.4—Cultural Resources and Tribal Cultural Resources		
Impact CUL-1: The proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.	–	N/A
Impact CUL-2: The proposed project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	–	N/A
Impact CUL-3: The proposed project could disturb human remains, including those interred outside of formal cemeteries.	–	N/A
Impact CUL-4: The proposed project would not cause a substantial adverse change in the significance of a Tribal Cultural Resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).	–	N/A
Impact CUL-5: The proposed project would not cause a substantial adverse change in the significance of a Tribal Cultural Resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.	–	N/A
Section 3.5—Energy		
Impact ENER-1: The proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	–	N/A

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact ENER-2: The proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.	–	N/A
Section 3.6—Geology, Soils, and Seismicity		
Impact GEO-1: The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii) Strong seismic ground shaking. iii) Seismic-related ground failure, including liquefaction. iv) Landslides.	–	N/A
Impact GEO-2: The proposed project would not result in substantial soil erosion or the loss of topsoil.	–	N/A
Impact GEO-3: The proposed project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the proposed project, and potentially result in a settlement, an on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	–	N/A
Impact GEO-4: The proposed project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.	–	N/A
Impact GEO-5: The proposed project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems	–	N/A

Impacts	Mitigation Measures	Level of Significance After Mitigation
where sewers are not available for the disposal of wastewater.		
Impact GEO-6: The proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	**MM GEO-6:** Applicants, owners, and/or sponsors of all future development or construction projects shall be required to perform or provide paleontological monitoring for all proposed excavations in the Colma Formation and Merced Formation, including those buried in the shallow subsurface below Quaternary deposits, due to the high paleontological sensitivity for significant resources in these areas. Should significant paleontological resources (e.g., bones, teeth, well-preserved plant elements) be unearthed by the future project construction crew, the project activities shall be diverted at least 15 feet from the discovered paleontological resources until a professional vertebrate Paleontologist has assessed such discovered resources and, if deemed significant, such resources shall be salvaged in a timely manner. The applicant/owner/sponsor of said project shall be responsible for diverting project work and providing the assessment including retaining a professional vertebrate Paleontologist for such purpose. Collected fossils shall be deposited by the applicant/owner/sponsor in an appropriate repository (e.g., University of California Museum of Paleontology (UCMP), California Academy of Sciences) where the collection shall be properly curated and made available for future research.	Less than significant impact.
Section 3.7—Greenhouse Gas Emissions		
Impact GHG-1: The proposed project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	–	N/A
Impact GHG-2: The proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.	–	N/A
Section 3.8—Hazards and Hazardous Materials		
Impact HAZ-1: The proposed project would not create a significant hazard to the public or the environment	–	N/A

Impacts	Mitigation Measures	Level of Significance After Mitigation
through the routine transport, use, or disposal of hazardous materials.		
Impact HAZ-2: The proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.	–	N/A
Impact HAZ-3: The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	–	N/A
Impact HAZ-4: The proposed project would not be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment.	–	N/A
Impact HAZ-5: The proposed project would not result in a safety hazard or excessive noise for people residing or working in the project area.	–	N/A
Impact HAZ-6: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	–	N/A
Section 3.9—Hydrology and Water Quality		
Impact HYD-1: The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.	–	N/A
Impact HYD-2: The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the	–	N/A

Impacts	Mitigation Measures	Level of Significance After Mitigation
proposed project may impede sustainable groundwater management of the basin.		
Impact HYD-3: The proposed project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i.) Result in substantial erosion or siltation on- or off-site. ii.) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. iii.) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. iv.) impede or redirect flood flows.	–	N/A
Impact HYD-4: The proposed project could be located in a flood hazard zone, tsunami, or seiche zone, and could risk release of pollutants due to project inundation.	–	N/A
Impact HYD-5: The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	–	N/A
Section 3.10—Land Use and Planning		
Impact LAND-1: The proposed project would not physically divide an established community.	–	N/A
Impact LUP-2: The proposed project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	–	N/A

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.11—Noise		
Impact NOI-1: The proposed project could generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	**MM NOI-1: Operational Noise Reduction Plan** Prior to issuance of building permits, the project applicant or sponsor shall implement the following measures to limit on-site operational stationary noise source impacts: • Any proposed development projects that include parking areas, terminals, or loading docks of commercial or industrial land uses within 300-feet of a residential receptor shall demonstrate compliance with Policies NOI-1.1 and NOI-1.2 of the City's Noise Element by submitting a final acoustical report prepared to the satisfaction of the Planning Division that identifies design measures to adequately minimize the potential noise impacts of vehicles on the site to adjacent land uses. The report must be approved by the Planning Division prior to issuance of building permits. • For any future development project that would include exterior mechanical systems (such as mechanical ventilation systems) within 50 feet of a residential receptor, the project applicant or sponsor shall submit a final acoustical report prepared to the satisfaction of the Planning Division that demonstrates compliance of the project with Policies NOI-1.1 and NOI-1.2 of the City's Noise Element. Noise reduction design features may include, but are not limited to, locating stationary noise sources on the site to be shielded by structures (buildings, enclosures, or sound walls) or by using equipment that has a quieter rating. The report must be approved by the Planning Division prior to issuance of building permits.	Less than significant impact.
Impact NOI-2: The proposed project could result in generation of excessive groundborne vibration or groundborne noise levels.	–	N/A
Impact NOI-3: The proposed project could expose people residing or working in the plan area to excessive noise levels for a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport.	**MM NOI-3: Airport Noise Impact Reduction Plan** Prior to issuance of building permits, the project applicant or sponsor of proposed development projects shall implement the following measures to limit airport activity noise source impacts: • Any proposed residential development project or any hotel, motel, or transient lodging land use development project, that would be located	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	within the San Francisco International Airport (SFO) 65 A-weighted decibel (dBA) Community Noise Equivalent Level (CNEL) noise contours, shall demonstrate compliance with Policies NOI-1.1 and NOI-1.2 of the City's Noise Element by submitting a final acoustical report prepared to the satisfaction of the Planning Division that identifies design measures to adequately minimize airport activity noise levels to meet the interior noise level standards shown in Table 11 of the Noise Element. Outdoor active use space must also comply with the exterior noise standards of Table 11 of the Noise Element or must be excluded from such projects. The report must be approved by the Planning Division prior to issuance of building permits. • Any proposed commercial development project that would be located within the SFO 70 dBA CNEL noise contours shall demonstrate compliance with Policies NOI-1.1 and NOI-1.2 of the City's Noise Element by submitting a final acoustical report prepared to the satisfaction of the Planning Division that identifies design measures to adequately minimize airport activity noise levels to meet the interior noise level standards shown in Table 11 of the Noise Element. The report must be approved by the Planning Division prior to issuance of building permits. • Any proposed institutional or public facility development project that would be located within the SFO 65 dBA CNEL noise contours shall demonstrate compliance with Policies NOI-1.1 and NOI-1.2 of the City's Noise Element by submitting a final acoustical report prepared to the satisfaction of the Planning Division that identifies design measures to adequately minimize airport activity noise levels to meet the interior noise level standards shown in Table 11 of the Noise Element. Outdoor active use space must also comply with the exterior noise standards of Table 11 of the Noise Element or must be excluded from such projects. The report must be approved by the Planning Division prior to issuance of building permits.	
Section 3.12—Population, Housing and Employment		
Impact POP-1: The proposed project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes	–	N/A

Impacts	Mitigation Measures	Level of Significance After Mitigation
and businesses) or indirectly (for example, through extension of roads or other infrastructure).		
Impact POP-2: The proposed project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.	–	N/A
Section 3.13—Public Services and Recreation		
Impact PUB-1: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, need for new or physically altered fire protection 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.	–	N/A
Impact PUB-2: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection.	–	N/A
Impact PUB-3: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for schools.	–	N/A
Impact PUB-4: The proposed project would not result in substantial adverse physical impacts associated with the	–	N/A

Impacts	Mitigation Measures	Level of Significance After Mitigation
provision of new or physically altered library facilities, need for new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for library facilities.		
Impact PUB-5: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered other public facilities, need for new or physically altered other public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for other public facilities.	–	N/A
Impact REC-1: 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.	–	N/A
Impact REC-2: The proposed project could include parks or recreational facilities or require the construction or expansion of parks or recreational facilities, which may have an adverse physical effect on the environment.	–	N/A
Section 3.14—Transportation		
Impact TRANS-1: Implementation of the proposed project would conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	**MM TRANS-1: Transportation Demand Management** To reduce VMT, the City shall implement its Transportation Demand Management (TDM) Ordinance as part of the Zoning Code Amendments and parking requirements. The City shall also update its TDM Ordinance and parking requirements every five to ten years and establish an East of 101 Area Trip Cap, to achieve the maximum feasible reductions in vehicle travel. The City shall achieve the performance standards outlined in the TDM Ordinance pursuant to Section 20.400.004 of the Zoning Ordinance.	**Significant and unavoidable.** While impacts would be less than significant for citywide Home-Based VMT Per Resident for residential use without mitigation, impacts with mitigation (MM TRANS-1) for citywide Total VMT Per Service Population and for Work-Based VMT Per Employee

Impacts	Mitigation Measures	Level of Significance After Mitigation
	The City shall review and update its TDM Ordinance every five to ten years to limit Total VMT and Work-Based VMT by incentivizing use of transit and active transportation and disincentivizing auto use. The TDM Ordinance shall cover all development projects generating greater than 100 daily trips, with the most stringent requirements for office/R&D land uses that disproportionately account for the highest rates of VMT in the City. Development projects shall implement a combination of TDM programs (pursuant to Sections 20.400.003 and 20.400.004 of the Zoning Ordinance), services, and infrastructure improvements, including but not limited to: establishing trip reduction programs; subsidizing transit and active transportation use; coordinating carpooling and vanpooling; encouraging telecommuting and flexible work schedules; designing site plans to prioritize pedestrian, bicycle, and transit travel; funding first/last mile shuttle services; establishing site-specific trip caps; managing parking supply; and constructing transit and active transportation capital improvements. Developments shall be subject to annual reporting and monitoring. The City shall establish a fine structure for developments found to be out of compliance and apply any revenues from fines to infrastructure and services aimed at reducing VMT. The City shall establish an East of 101 Area Trip Cap to support the monitoring of vehicle trip activity and focus efforts to reduce VMT. The area-wide trip cap shall apply to the high intensity employment uses in the East of 101 Area. The City shall conduct annual traffic counts along the cordon area perimeter. Should the trip cap be reached, the City shall consider corrective actions such as: revising mode share targets for projects subject to the TDM Ordinance, identifying new funding measures for TDM services, implementing new vehicle user charges, creating new street connections, or slowing the pace of development approvals within the cordon zone. The City shall review and update its parking requirements every five to ten years to align with its TDM Ordinance and East of 101 Area Trip Cap. The City shall establish parking maximums for office/R&D uses to ensure that VMT reduction goals are incorporated into the design of development projects.	would remain significant and unavoidable. Even with the General Plan Update policies and mitigation measures related to the TDM Ordinance, East of 101 Area Trip Cap, and parking requirements, the City may not achieve the overall VMT threshold reduction level due to uncertainty in the cumulative effectiveness of these measures as well as unknowns related to transit service levels, transportation technology, and travel behavior. Moreover, these policies and mitigation measures primarily apply to new developments; existing land uses, and land uses that have already been approved and are under construction are generally not affected. Because of the programmatic nature of the proposed project, no additional mitigation measures are available, and the impact is considered significant and unavoidable.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact TRANS-2: Implementation of the proposed project would not conflict with a program, plan, ordinance, or policy of the circulation system regarding bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities, that may have a significant impact on the environment.	–	N/A
Impact TRANS-3: Implementation of the proposed project would not conflict with a program, plan, ordinance, or policy of the circulation system regarding transit facilities, or otherwise decrease the performance or safety of such facilities, that may have a significant impact on the environment.	–	N/A
Impact TRANS-4: Implementation of the proposed project could substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	**MM TRANS-4: Freeway Offramp Queue Improvements** To minimize queueing hazards, the City shall work with Caltrans to develop improvement measures for freeway off-ramps and adjacent intersections that help manage offramp queues. These measures may include geometric changes, changes to signal timing and phasing, and new connections as identified in Table 3.14-5. Such improvement measures shall not adversely affect pedestrian, bicycle, and transit conditions or otherwise undermine the City's VMT mitigation efforts described in MM TRANS-1. MM TRANS-1 is also applicable here and should be implemented to minimize freeway offramp queues.	**Significant and unavoidable.** Even with the implementation of General Plan Update policies and actions and implementation of MMs TRANS-4 and TRANS-1, given the uncertainty around specific operational conditions and ability to mitigate such conditions in a constrained right-of-way, this impact remains significant and unavoidable. However, due to the programmatic nature of the proposed project, no additional mitigation measures are available, and the impact is considered significant and unavoidable.
Impact TRANS-5: Implementation of the proposed project would not result in inadequate emergency access.	–	N/A

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.15—Utilities and Service Systems		
Impact UTIL-1: The proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which would cause significant environmental effects.	–	N/A
Impact UTIL-2: Sufficient water supplies would be available to serve the proposed project and reasonably foreseeable future development during normal, dry, and multiple dry years.	–	N/A
Impact UTIL-3: The wastewater treatment provider would have adequate capacity to serve the proposed project in addition to the provider's existing commitments.	–	N/A
Impact UTIL-4: 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. In addition, the proposed project would comply with federal, State, and local statutes and regulations related to solid waste.	–	N/A
Section 3.16—Wildfire		
Impact WILD-1: The proposed project would not expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires.	–	N/A
Impact WILD-2: The proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan.	–	N/A

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact WILD-3: The proposed project would not, 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.	–	N/A
Impact WILD-4: 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.	–	N/A
Impact WILD-5: 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.	–	N/A

CHAPTER 1: INTRODUCTION

This Draft Program Environmental Impact Report (Program EIR) was prepared in accordance with and in fulfillment of the California Environmental Quality Act (CEQA) and the State CEQA Guidelines. As described in CEQA Guidelines Section 15121(a), an EIR is a public information document that assesses the potentially significant environmental impacts of a project. CEQA requires that an EIR be prepared by the agency with primary responsibility over the approval of a project (the lead agency). The City of South San Francisco (City) is the lead agency for the proposed South San Francisco General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project). Public agencies are charged with the duty to consider and minimize environmental impacts of proposed development where feasible and have the obligation to balance economic, environmental, and social factors.

The City's comprehensive General Plan was adopted in 1999. The City's Housing Element was certified in 2015 and is valid until 2023. The process of updating the existing Housing Element is underway and is being conducted simultaneously to, but not analyzed as part of, this General Plan Update. Once adopted, the proposed General Plan Update would replace the 1999 General Plan. The General Plan Update was developed with community input and reflects the community's vision for South San Francisco. A summary of the community outreach and public participation process for the General Plan Update is provided in Section 2.1.2, Public Outreach, Project Description.

The General Plan Update is a forward-looking document that will serve as the blueprint for the City's vision through the year 2040. The goals, policies, and actions in the General Plan Update will serve as a compass for decision-makers and will shape future plans and actions of the City. The General Plan Update anticipates approximately 14,312 net new housing units and approximately 42,297 net new employment opportunities by 2040. The proposed amendments to the Zoning Code would be necessary to implement the General Plan Update and incorporate a number of major policies from documents which were previously adopted. The Climate Action Plan includes a community-wide inventory of greenhouse gas (GHG) emissions and identifies strategies and measures to reduce GHG emissions generated by existing and future uses in the City.

Although the general locations and types of development can be anticipated based on the guidance in the General Plan Update, Zoning Code Amendments, and Climate Action Plan, until the City receives a development application for subsequent development under the proposed project, the exact locations, types of development, and potential impacts to the environment are too speculative to be determined. As appropriate, future construction and development plans would be subject to project-level CEQA analysis and potentially additional feasible mitigation, if necessary.

The proposed project has been developed to be largely self-mitigating in that the policies, actions, and strategies in the General Plan Update, Zoning Code Amendments, and Climate Action Plan recognize the importance of natural environment and are designed to protect the environment and environmental resources. In certain instances, mitigation is included to reinforce and enhance the protections identified in the policies, actions, and strategies. However, even with implementation of all available mitigation, the proposed project would result in significant unavoidable impacts related

to project-level vehicle miles traveled, project-level roadway safety, cumulative vehicle miles traveled, cumulative roadway safety, project level conflict with 2017 Bay Area Clean Air Plan and cumulative criteria air pollutants.

1.1 - Purpose of the Environmental Impact Report

The City of South San Francisco, as lead agency, determined that the General Plan Update, Zoning Code Amendments, and Climate Action Plan are a "project" under CEQA. CEQA requires the preparation of an EIR prior to approving any project that may have a significant impact on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines § 15378(a)).

This Draft Program EIR has been prepared according to CEQA requirements to evaluate the potential environmental impacts associated with the implementation of the proposed project. The purpose of this Draft Program EIR is to inform public agency decision-makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from implementation of the proposed project. In addition, this Draft Program EIR considers updates to the text of the General Plan in order to reflect changes in applicable statutes and regulations, updates to include the current baseline for the 2023-2031 Housing Element, and changes in City planning documents that have occurred since adoption of the approved General Plan in 1999.

This Draft Program EIR also discusses alternatives to the proposed project and identifies mitigation measures that would offset, minimize, or otherwise avoid potentially significant environmental impacts. This Draft Program EIR is intended to provide decision-makers and the public with information that enables consideration of the environmental consequences of the proposed project and has been prepared in accordance with CEQA (California Public Resources Code [PRC] § 21000, *et seq.*) and the CEQA Guidelines (California Code of Regulations [CCR] Title 14, Division 6, Chapter 3).

1.2 - Type of Environmental Impact Report

The State CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This Draft EIR has been prepared as a Program EIR pursuant to CEQA Guidelines Section 15168. Section 15168 states:

> A Program EIR is an EIR that may be prepared on a series of actions that can be characterized as one large project and are related either:
>
> 1. Geographically,
> 2. As logical parts 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 regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

As a program-level analysis, this Draft Program EIR considers the broad environmental effects of the proposed project. The analysis in this Draft Program EIR does not examine the site-specific effects of individual projects that may occur in the future. Subsequent projects and activities under the General Plan Update, Zoning Code Amendments, and Climate Action Plan will be examined in light of a certified Final Program EIR. Once the Final Program EIR has been certified, subsequent activities within the program must be evaluated to determine whether an additional CEQA document needs to be prepared. If subsequent activities could be found to be within the certified Final Program EIR scope, additional environmental documents may not be required (CEQA Guidelines § 15168(c)).

Additional environmental review under CEQA may be required for subsequent projects that would have effects not examined in the certified Final Program EIR. That later analysis may tier from the certified Final Program EIR as provided by CEQA and would be generally based on the subsequent project's consistency with the General Plan Update, Zoning Code Amendments, and Climate Action Plan and the analysis in the certified Final Program EIR, as required under CEQA. It may also be determined that some future projects or infrastructure improvements may be exempt from additional environmental review. When individual subsequent projects or activities are proposed under the General Plan Update, Zoning Code Amendments, and Climate Action Plan, the lead agency that would approve and/or implement the individual project would examine the projects or activities to determine whether their effects were adequately analyzed in the certified Final Program EIR (see, e.g., CEQA Guidelines §§ 15152, 15168, and 15183). If the projects or activities would have no effects beyond those disclosed in the certified Final Program EIR, no further CEQA compliance would be required.

1.3 - Intended Uses of the Draft Program Environmental Impact Report

This Draft Program EIR, and ultimately the Final Program EIR, is intended to evaluate the environmental impacts of the adoption and implementation of the proposed project. The document will serve as a source of information in the review of subsequent planning and development proposals, including subsequent environmental review of development projects, for infrastructure provision and individual development proposals, and for public facilities to serve new development.

The City intends and anticipates that the certified Final Program EIR would be utilized in conjunction with existing streamlining provisions provided by CEQA, emerging streamlining techniques, such as those related to implementation of the Sustainable Communities Strategy (PRC § 21155), and other streamlining procedures, including those that may become available in the future. To promote the effective use of City resources, the analysis in this certified Draft Program EIR may be considered the first tier of environmental review and it is the intent of the City that future, project-specific and/or site-specific CEQA documents may utilize this analysis as appropriate. Tiering refers to a multilevel approach to preparing environmental documents that is codified in Public Resources Code Section 21083.3 and State CEQA Guidelines Section 15152.

1.4 - Agencies and Approvals

The term "Responsible Agency" includes all public agencies other than the lead agency that have discretionary approval power over the project or an aspect of the project (CEQA Guidelines § 15381). For the purpose of CEQA, a "Trustee" agency has jurisdiction by law over natural resources that are held in trust for the people of the State of California (CEQA Guidelines § 15386). While no Responsible Agencies or Trustee Agencies are responsible for approvals associated with adoption of the General Plan Update, Zoning Code Amendments, and Climate Action Plan, subsequent projects, and other actions to support implementation of the proposed project would require actions, including permits and approvals, by Trustee and Responsible Agencies that may include, but are not necessarily limited to:

- California Department of Fish and Wildlife (CDFW)
- California Department of Transportation (Caltrans)
- Regional Water Quality Control Board (RWQCB)
- San Mateo Local Agency Formation Commission (LAFCo)
- United States Army Corps of Engineers (USACE)
- United States Fish and Wildlife Service (USFWS)
- San Francisco Bay Conservation and Development Commission (BCDC)
- San Francisco Public Utilities Commission (SFPUC)
- City/County Associations of Governments of San Mateo County (C/CAG)

1.5 - Environmental Review Process

The review and certification process for this Draft Program EIR has involved, or will involve, the general procedural steps described below.

1.5.1 - Notice of Preparation

In accordance with CEQA Guidelines Section 15082, the City circulated the original Notice of Preparation (NOP) of a Program EIR for the General Plan Update from February 3, 2021, to March 22, 2021, to Trustee and Responsible Agencies, the State Clearinghouse (SCH), and the public. A scoping meeting was held on February 17, 2021, which was attended by three members of the public. A revised NOP was circulated from January 14, 2022, to February 28, 2022, to provide the public with an opportunity to comment on changes that were made to the Project Description related to net new housing units and net new employment opportunities anticipated under the General Plan Update. A Scoping Meeting was held on January 31, 2022, which was attended by one member of the public. Comments received on the NOP circulated from February 3, 2021, to March 22, 2021, as well as comments received on the revised NOP circulated from January 14, 2022, to February 28, 2022, will be considered part of the administrative record. The NOP and all comment letters received on the NOP are presented in Appendix A.

The City received 16 comment letters on the NOP and one public comment at the Scoping Meeting. Copies of these letters are provided in Appendix A of this Draft Program EIR. The comments are summarized below.

- Recommends consultation with California Native American tribes traditionally and culturally affiliated with the geographic area of the proposed project.
- Recommends that the Draft EIR provides baseline habitat assessments for special-status species plant, fish, and wildlife species located and potentially located within the project area and surrounding lands.
- Recommends that the Draft EIR describe aquatic habitats, such as wetlands and/or waters of the United States or State, and any sensitive natural communities or riparian habitat in the project area.
- Recommends that the Draft EIR include the reasonably foreseeable direct and indirect changes (temporary and permanent) to biological resources, including cumulative impacts.
- Recommends implementation of avoidance and minimization measures for special-status plant and wildlife species.
- Recommends that the Draft EIR address liquefaction, landslide, faulting, and ground shaking geologic hazards.
- States that Oyster Point Harbor and Oyster Cove Marina are susceptible to tsunami hazards.
- Recommends that the GHG impact analysis include an evaluation of the General Plan's consistency with the most recent Assembly Bill (AB) 32 Scoping Plan and the State's 2030 and 2050 climate goals.
- Recommends that the Draft EIR evaluate all feasible measures, both on-site and off-site, to minimize air quality and GHG impacts.
- Recommends that the Draft EIR evaluate the General Plan's consistency with the Air District's 2017 Clean Air Plan, the South San Francisco Climate Action Plan (2014), and the San Mateo County's Sea Level Rise Vulnerability Assessment (2018).
- Recommends that the Draft EIR analyze the General Plan's consistency with applicable SFPUC adopted plans, policies, and guidelines in the land use analysis.
- Expresses concern that portions of the proposed mixed-use residential areas east of U.S. Highway 101 (US-101) are within the airport's runway safety zone boundaries and 65 decibel Community Noise Equivalent Level (CNEL) noise contour.
- Requests that the Program EIR evaluate project consistency with all comprehensive Airport Land Use Compatibility Plan (ALUCP) for the environs of San Francisco International Airport (SFO) regulatory requirements and policies.
- Recommends that a detailed Vehicle Miles Traveled (VMT) analysis be included in the Draft EIR for projects that do not meet the screening criteria.
- Recommends that the Draft EIR include a robust Transportation Demand Management (TDM) Program and provide a list of measures to reduce VMT and GHG emissions.
- Recommends that the Draft EIR evaluate land uses and infrastructure within the two unincorporated islands, including sewer and right-of-way improvements.

- Highlights disparate pollution, health, and noise impacts on communities of color in South San Francisco resulting from industry on the east side and discriminatory housing policies.
- Requests that the General Plan include more affordable housing, parks, and green space on the east side and neighborhoods like sunshine gardens.
- Requests that the City create more routes for the free shuttle, especially to and from the Bay Area Rapid Transit (BART) station.
- States that housing/mixed use (retail) near BART would help mitigate climate change/improve air quality by discouraging vehicle use.
- States that Old Town, Downtown, Pecks Lots, and Cypress Park areas need more parks and park improvements for infants, young children, teens, and seniors.
- Expresses concern regarding health impacts of housing near US-101.

1.5.2 - Public Notice/Public Review

Upon completion of the Draft Program EIR for the proposed project, the City will file a Notice of Completion (NOC) with the SCH of the Governor's Office of Planning and Research to begin the public review period (PRC § 21161).

Concurrent with the NOC, the City will provide a public notice of availability for the Draft Program EIR and invite comments from the general public, agencies, organizations, and other interested parties. Consistent with CEQA requirements, the review period for this Draft Program EIR will be no less than 45 days. Public comments on the Draft Program EIR will be accepted in written form. All comments or questions regarding the Draft Program EIR should be addressed to:

City of South San Francisco
Planning Division
Billy Gross, Principal Planner
315 Maple Avenue
South San Francisco, CA 94080
Phone: 650.877.8535
Email: billy.gross@ssf.net

In addition, the City will consider the Draft Program EIR at one or more public hearings before the Planning Commission and/or City Council. The public will have an opportunity to provide verbal comments on the Draft Program EIR during public hearings. Notice of public hearings will be posted on the City's website, in the local newspaper, and through direct mailing to interested parties that have requested notification.

1.5.3 - Response To Comments on the Draft Program EIR/Final Program EIR

Following the public review period on the Draft Program EIR, a Final Program EIR will be prepared. The Final Program EIR will respond to written comments received during the public review period and to oral comments made at public hearings. The Final Program EIR may also include corrections, clarifications, and additional explanatory information that is being added to the Draft Program EIR.

1.5.4 - Certification of the Draft Program EIR/Project Consideration

The City Council is the decision-making body on the proposed project and the Draft Program EIR. If the City Council finds that the Final Program EIR is "adequate and complete" in accordance with Section 15151, they may certify the Final Program EIR in accordance with CEQA Guidelines. As set forth by CEQA Guidelines Section 15151, the standards of adequacy require an EIR to provide a sufficient degree of analysis to allow decisions to be made regarding the proposed project that take account of environmental consequences.

Upon review and consideration of the Final Program EIR, the City Council may take action to approve, revise, or reject the proposed project. A decision to approve the proposed project, for which this Draft Program EIR identifies significant environmental effects, must be accompanied by written findings in accordance with CEQA Guidelines Sections 15091 and 15093. A Mitigation Monitoring and Reporting Program (MMRP) would also need to be adopted in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines Section 15097. The MMRP will list all mitigation measures that have been incorporated into or imposed upon the proposed project to reduce or avoid significant effects on the environment. The MMRP will be designed to ensure that these measures are carried out during project implementation in a manner consistent with the Draft Program EIR.

1.6 - Organization and Scope

CEQA Guidelines Sections 15122-15132 identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. The environmental issues addressed in the Draft Program EIR were established through review of environmental and planning documentation developed for the proposed project, environmental and planning documentation prepared for recent projects located within the City of South San Francisco, and responses to the NOP and public scoping meeting comments.

This Draft Program EIR is organized in the following manner:

Executive Summary

The Executive Summary summarizes the characteristics of the proposed project, known areas of controversy, and issues to be resolved and provides a concise summary matrix of the proposed project's environmental impacts and mitigation measures consistent with CEQA Guidelines Section 15123.

Chapter 1.0–Introduction

This chapter briefly describes the proposed project and the purpose of the environmental evaluation, identifies the lead, trustee, and responsible agencies, summarizes the process associated with preparation and certification of an EIR, identifies the scope and organization of the Draft Program EIR, and summarizes comments received on the NOP.

Chapter 2.0–Project Description

This chapter provides a detailed description of the proposed project, including a general overview of the General Plan Update process, project proponent, regional location and planning area, objectives, and characteristics of the proposed project, including required discretionary approvals.

Chapter 3.0–Environmental Impact Analysis

This chapter contains the analysis of environmental topic areas as identified below. Each section contains a description of the existing environment as it pertains to the topical area as well as a description of the regulatory environment that may be applicable to the proposed project. Each section also identifies thresholds of significance by which impacts are determined, a description of project-related impacts associated with the environmental topic, identification of appropriate mitigation measures, and a conclusion as to the significance of each impact.

The following environmental topics are addressed in this chapter:

- Aesthetics, Light, and Glare
- Air Quality
- Biological Resources
- Cultural and Tribal Cultural Resources
- Energy
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population, Housing, and Employment
- Public Services and Recreation
- Transportation
- Utilities and Service Systems
- Wildfire

Chapter 4.0–Alternatives to the Proposed Project

This chapter provides a comparative analysis of the proposed project and the selected alternatives, including the mandatory “No Project” alternative. CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the proposed project, which could feasibly attain the basic objectives of the proposed project and avoid and/or lessen any significant environmental effects of the proposed project.

Chapter 5.0–Other CEQA Considerations

This chapter evaluates and describes the following CEQA required topics: significant and unavoidable impacts, growth-inducing impacts, and significant irreversible environmental changes.

Chapter 6.0–Effects Found not to be Significant

This chapter analyzes potential impacts resulting from conversion of agriculture and forest lands to non-agriculture and non-forest uses and loss of any known significant mineral occurrences. Given the location of the City of South San Francisco in the urbanized context of the San Francisco Bay Area and the lack of mineral or agricultural resources in the area, these resources are anticipated to not be major considerations for the proposed project. Existing conditions and regulations will be summarized.

Chapter 7.0–Persons and Organizations Consulted-List of Preparers

This chapter lists all authors and agencies that assisted in the preparation of the Draft Program EIR, by name, title, and company or agency affiliation.

Appendices

This chapter includes the NOP and other procedural documents pertinent to the Draft Program EIR, as well as technical material prepared to support the analysis.

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CHAPTER 2: PROJECT DESCRIPTION

This Draft Program Environmental Impact Report (Draft Program EIR) analyzes the potential physical and environmental effects of the proposed South San Francisco General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project). The General Plan Update is a forward-looking document that will serve as the blueprint for the City of South San Francisco's (City's) vision through the year 2040. The goals, policies, and actions in the General Plan Update will serve as a compass for decision-makers and will shape future plans and actions of the City. The General Plan Update anticipates approximately 14,312 net new housing units and approximately 42,297 net new employment opportunities by 2040. The updated 2022 Climate Action Plan (CAP) includes a community-wide inventory of greenhouse gas (GHG) emissions and identifies strategies and measures to reduce GHG emissions generated by existing and future uses in the City.

This section of the Draft Program EIR describes the key characteristics of the proposed project, including a general overview of the General Plan Update process; project proponent; regional location and planning area; objectives; and characteristics of the proposed project, including required discretionary approvals.

2.1 - General Plan Update Process

The City's comprehensive General Plan was initially adopted in 1999. The City's Housing Element was certified in 2015 and is valid until 2023. The process of updating the existing Housing Element is underway and is being conducted simultaneously to, but not analyzed as part of, this General Plan Update. Once adopted, the proposed General Plan Update would replace the 1999 General Plan.

The General Plan Update was developed with community input and reflects the community's vision for South San Francisco. A summary of the community outreach and public participation process is provided below.

2.1.1 - Notice of Preparation and Public Scoping Meeting

The original Notice of Preparation (NOP) of a Program EIR for the General Plan Update was circulated from February 3, 2021, to March 22, 2021, to Trustee and Responsible Agencies, the State Clearinghouse (SCH), and the public to share information about the proposed project and receive input on the scope of the environmental issues to be addressed in the Draft Program EIR. A Scoping Meeting was held on February 17, 2021, which was attended by three members of the public. A revised NOP was circulated from January 14, 2022, to February 28, 2022, to provide the public with an opportunity to comment on changes that were made to the Project Description related to net new housing units and net new employment opportunities anticipated under the General Plan Update. A Scoping Meeting was held on January 31, 2022, which was attended by one member of the public. Comments received on the NOP circulated from February 3, 2021 to March 22, 2021 as well as comments received on the revised NOP circulated from January 14, 2022 to February 28, 2022 will be considered part of the administrative record. The City received 16 comment letters on

the NOP and one public comment at the Scoping Meeting. Copies of these letters are provided in Appendix A of this Draft Program EIR, and the comments are summarized in Section 1.5.1, Notice of Preparation.

2.1.2 - Public Outreach

The City formed the General Plan Community Advisory Committee (CAC) to provide high-level feedback on the potential issues; the vision and guiding principles; land use and transportation alternatives; and climate adaptation, economic development, social equity, and other key policy topics. The CAC also serves as a sounding board for public engagement. All meetings and forums held by the CAC were open to the public and publicly noticed in advance.

The CAC met approximately 25 times from January 2019 through March 2022 to update the General Plan, giving their input and contributing to the crafting of the General Plan Update. The CAC held four Community Forums to discuss key topics in further detail.

In addition to the CAC meetings and forums, public outreach for the General Plan Update also included the following meetings and events:

- Community Conversations regarding General Plan policy by topic and geographic location in the City (10)
- Planning Sub-Area Meetings (9)
- Workshops with materials in several languages (9)
- “Ask a Planner” Sessions (9)
- “Pop-Up” informational and community input tables at various community events (4)
- Study Sessions with the City Council and/or Planning Commission (9)
- Padres en Acción Meeting en Español (1)
- Youth Advisory Council Meetings (2)
- Public Survey, including visioning, alternatives, and General Plan policy (3)

The City has maintained a web page devoted to informing the public about, and encouraging participation in, the General Plan Update process. The website includes public notices, meeting materials, presentations given to the Planning Commission and City Council, Resources and Reports, a Contact Us portal, and other background materials. The web page is located at: https://shapessf.com/.

2.2 - Project Proponent

The City of South San Francisco (City) is both the project proponent and the lead agency for the proposed project. The City’s Planning Division, which is located at 315 Maple Avenue, South San Francisco, CA 94080, prepared this Draft Program EIR with the assistance of Raimi + Associates and FirstCarbon Solutions (FCS).

2.3 - Regional Location and Planning Area

2.3.1 - Regional Location

The City of South San Francisco is in northern San Mateo County, California (Exhibit 2-1). The City encompasses approximately 31 square miles and has a population of 67,135[1] people. South San Francisco is bound by the City of Brisbane and San Bruno Mountain to the north, San Francisco Bay to the east, the City of San Bruno to the south, and Daly City, the City of Pacifica, the Town of Colma, and the Pacific Coast Ranges to the west (Exhibit 2-2). The San Francisco International (SFO) Airport is located immediately to the south but falls within the City and County of San Francisco's jurisdictional boundaries.

Regional access to the City is via highways and major roadways, including Interstate 280 (I-280), U.S. Highway 101 (US-101), El Camino Real (State Route 82), and Skyline Highway (State Route 35). In addition, the South San Francisco Bay Area Rapid Transit (BART) station is a gateway into the City, with approximately 842 passengers entering South San Francisco via this station on an average weekday.[2] Additionally, 452 passengers enter South San Francisco from Caltrain on an average week day.[3] SamTrans, a bus service that operates throughout San Mateo County and into parts of San Francisco and Palo Alto, has three bus lines that run through South San Francisco and serves approximately 24,077 passengers per day.[4,5] The San Francisco Bay Ferry also provides public transit service to and from the City and other locations around the San Francisco Bay to approximately 6,027 passengers per day.[6,7] The COVID-19 pandemic has dramatically changed the demand for travel in the Bay Area since March 2020. The effects of the initial shutdown resulted in substantial changes in travel behavior, including a decline in Vehicle Miles Traveled (VMT) and transit ridership, resulting in substantial cuts to transit service levels. While travel behavior has gradually returned to pre-pandemic levels, transit ridership levels have recovered at a slower pace.

2.3.2 - Planning Area

The South San Francisco General Plan Update Planning Area (Planning Area) consists of all properties located within the incorporated boundary of the City, as well as lands within the City's Sphere of Influence (SOI). The Planning Area consists of approximately 4,456 acres. Of these, approximately 4,226 acres are located within the City limits, with an additional 230 acres located within the SOI. The SOI, established by the San Mateo County Local Agency Formation Committee, is a planning boundary that is outside of the City's legal boundary that designates the City's probable future

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1 California Department of Finance. 2021. Population Estimate for Cities, Counties, and the State with Annual Percentage Change–January 1, 2020, and 2021. Website: http://dof.ca.gov/Forecasting/Demographics/Estimates/E-1/. Accessed January 29, 2022.
2 Bay Area Rapid Transit (BART). 2021. Monthly Ridership Reports (October 1, November 1, December 1). Website: https://www.bart.gov/about/reports/ridership. Accessed January 3, 2022.
3 Caltrain. 2019. Caltrain 2019 Annual Passenger Count Key Findings. Website: https://www.caltrain.com/Assets/Stats+and+Reports/2019+Annual+Key+Findings+Report.pdf. Accessed January 3, 2022.
4 SamTrans. 2022. Ridership. Website: https://www.samtrans.com/about/Bus_Operations_Information/Ridership.html. Accessed January 29, 2022.
5 8,788,180 riders divided by 365 days per year.
6 San Francisco Ferry Riders. 2022. Monthly Operating Statistics Report. Website: https://sanfranciscobayferry.com/sites/sfbf/files/opsreport/April2021.pdf. Accessed January 3, 2022.
7 2.2 million riders divided by 365 days per year.

boundary and service area and is periodically reviewed. The Planning Area boundaries for the General Plan Update are depicted in Exhibit 2-2.

The City's SOI includes two unincorporated San Mateo County "islands." One island is bound by I-280 on the west, Westborough Boulevard to the north, Orange Avenue roughly to the east, and Ponderosa Road to the south; most of this area is owned by the City and County of San Francisco and is the site of the California Golf Club of San Francisco. Ponderosa Elementary School is also situated in this unincorporated island on land owned by the South San Francisco Unified School District (SSFUSD). The other island is roughly bound by Conmur Street to the west, Country Club Drive to the north, Alida Way to the east, and Northwood Drive to the south, and consists primarily of single-family residential uses and religious facilities on larger lots.

2.3.3 - Existing Land Use

Existing land use refers to the way that land is currently being used in the City; in other words, it represents land uses that are currently (as of 2022) "on the ground." Existing land uses are mapped in Exhibit 2-3, and Table 2-1 shows the approximate acreage of each type of land use in the City. The most prevalent land use in the City is Residential (occupying 39.8 percent of land area), followed by Industrial/ Research and Development (29.5 percent); Parks, Open Space, and Common Greens (9.9 percent); and Public/Institutional (6.6 percent). The City includes approximately 153 acres of vacant land (3.4 percent).

Table 2-1: Existing Land Use

Land Use Type	Acres	Area (%)
Within City of South San Francisco	4,226.1	94.8
Residential	**1,773.5**	**39.8**
Single-family Residential	1,506.5	33.8
Duplex/Triplex/Quadplex	66.5	1.5
Multi-family	183.4	4.1
Mobile Home Park	17.1	0.4
Commercial	**250.5**	**5.6**
Hotel	57.0	1.3
General Retail/Service	110.9	2.5
Auto Retail	43.2	1.0
Food Retail	32.9	0.7
Mixed Use (Commercial/Residential)	6.5	0.1
Industrial/Research and Development	**1,313.7**	**29.5**
Office	190.0	4.3
Biotech/Research and Development	322.1	7.2
Warehouse	639.5	14.4

Land Use Type	Acres	Area (%)
Manufacturing/Processing	162.1	3.6
Parks, Open Space, and Common Greens	**442.4**	**9.9**
Public and Institutional	**292.9**	**6.6**
Vacant	**153.1**	**3.4**
Within Sphere of Influence	230.0	5.2
Single-family residential	41.4	0.9
Golf Course	183.4	4.1
Public and Institutional	4.7	0.1
Vacant	0.5	0.0
Grand Total	**4,456.1**	**100.0**

Notes:
1. Totals do not include utilities and transportation infrastructure.
2. Totals may not add due to rounding.

Source: City of South San Francisco GIS Data, 2021.

2.3.4 - Baseline Defined

According to Section 15125 of the CEQA Guidelines, an EIR must include a description of the existing physical environmental conditions in the vicinity of the project to provide the "baseline condition" against which project-related impacts are compared. Normally, the baseline condition is the physical condition that exists when the NOP is published. The NOP for the proposed project was published January 14, 2022. The CEQA Guidelines recognize that the date for establishing an environmental baseline cannot be rigid. Because physical environmental conditions may vary over a range of time periods, the use of environmental baselines that differ from the date of the NOP is reasonable and appropriate when doing so results in a more accurate environmental analysis. Unless otherwise noted, the baseline year (2022) is used for all impact areas analyzed in this Draft Program EIR to determine impacts. For analytical purposes, impacts associated with implementation of the proposed project are derived from the environmental setting of 2022. This Draft Program EIR presents and analyzes the proposed allowable growth scenario within the Planning Area from 2022 through a planning horizon of 2040.

2.4 - Objectives of the Proposed Project

CEQA Guidelines Section 15124(b) requires a statement of objectives sought by a proposed project, including the underlying purpose of the project. The proposed project is intended to update the approved 1999 General Plan to guide growth and land development of the City while maintaining its high quality of life, diverse and inclusive community, livable neighborhoods and excellent services, culture of innovation, and environmental leadership to ensure all people have an equitable opportunity to reach their full potential. For the purpose of this Draft Program EIR analysis, the following objectives have been identified for the proposed project:

- Reflect the current goals and vision expressed by South San Francisco residents, businesses, decision-makers, and other stakeholders.
- Address issues and concerns identified by South San Francisco residents, businesses, decision-makers, and other stakeholders.
- Provide affordable, safe, attractive, amenity-rich neighborhoods, balancing housing options with commercial and employment access.
- Ensure that high-quality and accessible services, facilities, and amenities are available for residents at all stages of their lives, such as internet connectivity, parks and open spaces, emergency response services, and educational and recreational opportunities.
- Provide a safe, convenient, and accessible transportation network that is well-connected to the region by ensuring that streets have accessible alternate transportation for all ages and abilities.
- Build a resilient community that is prepared for the future effects of climate change and natural disasters by prioritizing resources for the City's most vulnerable residents and investing in climate pollution reduction, efficient energy and water use, and clean air.
- Foster a prosperous downtown and local economy by supporting local businesses and strengthening the City's role as the worldwide hub of the biotech and life sciences.
- Make the downtown a destination for all by providing a diversity of uses as well as improving walkability, safety, and visual interest.
- Embrace the City's legacy as "The Industrial City" and maintain a core of middle-wage jobs in the City.
- Identify strategies and measures to reduce GHG emissions generated by existing and future uses in the City.
- Update the Zoning Code to reflect the shared vision of the new General Plan and implement its new policies that reflect and preserve community character, respond to economic realities and trends, facilitate reinvestment in the community and development of housing for all segments, and encourage appropriate use of land.
- Address new requirements of State law.

2.5 - Characteristics of the Proposed Project

This section describes the land use map, associated land use categories, potential buildout, policy updates, overview of General Plan Elements, description of Zoning Code Amendments, overview of the CAP, required discretionary approvals, subsequent use of the Draft Program EIR, and other governmental agency approvals under the proposed project.

2.5.1 - General Plan Update Land Use Map

The Proposed Land Use Map designates the general location, distribution, and extent of land uses within the Planning Area and identifies proposed land use designations for each parcel within the

City of South San Francisco and within the City's SOI (Exhibit 2-4). A version of the Proposed Land Use Map depicting only the changes proposed as part of the General Plan Update is shown in Exhibit 2-5.

The proposed land use categories for the General Plan Update and the approximate acreage for each land use designation are identified in Table 2-2. The maximum development densities and maximum intensities of building development are also identified in the table.

Table 2-2: General Plan Update Land Use Categories

Land Use Designation	Description	Maximum Density	Maximum Floor Area Ratio (FAR)	Acres
Residential				
Low Density Residential	Detached, single-family residential development.	8 du/ac	–	1,300
Medium Density Residential	Attached or detached single-family housing, duplexes, triplexes, fourplexes, townhouses, and condominiums.	22 du/ac	–	341
Medium High Density Residential	A mix of medium density residential development, including townhouses, condominiums, and apartment buildings.	37.5 du/ac	–	147
High Density Residential	A mix of medium density residential development, including townhouses, condominiums, and apartment buildings.	50 du/ac	–	54
Downtown Residential Core	A higher density mix of residential housing types compatible in scale with adjacent Downtown residential districts.	125 du/ac	–	18
Urban Residential	A higher density residential area with a variety of multi-family housing choices.	180 du/ac	–	20
San Mateo County Low Density Residential	Detached single-family housing on large parcels.	2.2 du/ac	–	47
Nonresidential				
Community Commercial	Shopping centers and major commercial districts provide retail, services, hotels, and other amenities.	–	0.50 FAR	40
Business Technology Park	Campus-like environments for corporate headquarters, research and development facilities, and offices.	–	1.0 FAR	288
Business Technology Park High	High density corporate headquarters, research and development facilities, and offices.	–	2.0 FAR	493

Land Use Designation	Description	Maximum Density	Maximum Floor Area Ratio (FAR)	Acres
Business and Professional Office	Administrative, financial, business, professional, medical, and public offices in locations proximate to BART or Caltrain stations.	–	2.5 FAR	38
Mixed Industrial	Industrial lands for a wide range of manufacturing, processing, general service, warehousing, storage and distribution, and service commercial uses.	–	1.0 FAR	252
Mixed Industrial High	High density Industrial lands for a wide range of uses.	–	2.0 FAR	279
Industrial Transition Zone	A transition between a mixed-use area and high industrial area with a mix of residential and industrial uses.	120 du/ac	1.0 FAR	32
Genentech Master Plan	Private campus with corporate headquarters, research and development facilities and offices.	–	See Genentech Campus Master Plan	–
Mixed Use				
Low Density Mixed Use	Lower scale, mixed use blending residential, commercial, and retail uses and public spaces serving both surrounding neighborhoods and visitors from nearby areas.	60 du/ac	2.25 FAR	86
Lindenville Neighborhood Center	Neighborhood center with retail and commercial uses along the ground floor and residential uses above.	80 du/ac	3.0 FAR	4
Grand Avenue Core	The historic retail center of the City.	100 du/ac	4.0 FAR	15
Medium Density Mixed Use	A broad range of commercial, office, and residential uses and public spaces serving both surrounding neighborhoods and visitors from nearby areas.	120 du/ac	3.5 FAR	122
High Density Mixed Use	A walkable, mixed-use area located in Lindenville and along the South El Camino corridor with a focus on mixed-use (residential/commercial) and high density multi-family development.	140 du/ac	4.5 FAR	75
East of 101 Mixed Use	A walkable mixed-use area located adjacent to the East of 101 Transit Core with a focus on mixed use (residential/commercial), hotel, and high density multi-family development.	200 du/ac	5.0 FAR	95

Land Use Designation	Description	Maximum Density	Maximum Floor Area Ratio (FAR)	Acres
Downtown Transit Core	A vibrant, mixed-use area located adjacent to the Caltrain station that allows the highest intensities in the Downtown area.	180 du/ac	8.0 FAR	12
East of 101 Transit Core	Transit-oriented community with a walkable street pattern and a vibrant mix of high density multi-family and employment uses with supportive retail, services, and amenities.	200 du/ac	8.0 FAR	98
Civic/Other				
Planned Development	Planned residential, mixed use, or nonresidential development.	–	–	21
Public	Land reserved for public facilities, including government offices, the library, and the sewer treatment plant.	–	–	115
School	Land reserved for school sites and facilities.	–	–	177
Transportation	Land for transportation uses, including regional rails like BART and Caltrain.	–	–	67
Parks and Recreation	Parks, recreation complexes, public golf courses, and greenways.	–	–	277
Open Space	Reserved land for natural and active open space uses, including sites slopes greater than 30 percent, sensitive habitats, wetlands, creeks, areas subject to flooding, and power transmission line corridors.	–	–	429
Notes: du/ac = dwelling units per acre FAR = floor area ratio Source: General Plan Land Use and Community Design Element.				

2.5.2 - Potential Buildout Under the General Plan Update

This section describes the implications of the General Plan Update Buildout in terms of future new housing units, nonresidential uses, civic and open space uses, population, and jobs based on land use categories on the Proposed Land Use Map. Areas of change from existing land uses, and therefore areas that encompass the majority of projected net new development, are shown on Exhibit 2-5.

Full development under the General Plan Update is referred to as “buildout.” Although the General Plan Update applies a 20-year planning horizon, the General Plan Update is not intended to specify

or anticipate when buildout will actually occur; nor does the category of a site for a certain use necessarily mean the site will be built/redeveloped with that use within the next 20 years.

Existing land use conditions represent on-the-ground uses,[8] projects that are entitled, under review, or under construction, and approved plans (e.g., Genentech Master Plan). This Draft Program EIR uses the existing land use conditions data as a baseline from which to determine environmental impacts of the General Plan Update and its alternatives and assesses the level of development within the City based on reasonable assumptions for development activity anticipated to occur through buildout of the General Plan Update. To determine the amount of new residential uses, employment uses, and population growth, this Draft Program EIR estimates the density and intensity of the estimated buildout of the General Plan Update based on the assumptions described below.

The General Plan Update describes how and where the City plans to accommodate expected growth. Because South San Francisco is a fully built city, new development will primarily occur on parcels that already contain some existing homes or businesses. The City's primary approach to accommodating growth is to locate new housing and jobs in the East of 101, Lindenville, Downtown, and El Camino planning sub-areas (Exhibit 2-6) which are well served by Caltrain, BART, or SamTrans service and have good access to opportunity (such as jobs, neighborhood amenities, and health care facilities).

The total amount and rate of growth differs by planning sub-area. The total amounts and differing rates of growth expected among South San Francisco's planning sub-areas reflect multiple policy goals, such as creating transit-oriented communities near Caltrain and BART, reinforcing Downtown as the heart of the community, and producing workforce and affordable housing to meet the City's Regional Housing Needs Allocation (RHNA) allocation. The East of 101 and Lindenville sub-areas are expected to have the most significant housing and employment growth.

The East of 101 and Lindenville sub-areas also provide significant opportunities for linking housing growth with job access. The higher rates of reinvestment and growth could accommodate more of the City's expected long-term growth without increasing residential displacement risk. While the East of 101 and Lindenville sub-areas accommodate the majority of future housing and employment growth, the Downtown and El Camino planning sub-areas have moderate rates of growth. The City's residential neighborhoods will continue to experience incremental accessory dwelling unit (ADU) growth consistent with County and regional trends.

Residential and job growth by planning sub-area (Table 2-3 and Table 2-4) illustrate existing land use conditions ("Existing"), projected net new development during the proposed General Plan Update ("Projected"), and maximum total buildout of the proposed General Plan Update ("Buildout," which is equal to "Existing" plus "Projected").

[8] Employment data is from the California Employment Development Department, 2018. Housing and population data is from California Department of Finance Population and Housing Estimates, 2019.

Table 2-3: Projected Residential Growth at General Plan Update Buildout by Planning Sub-Area

Planning Sub-Areas	Existing (Number of Units)*	Projected (Number of Units)	General Plan Update Buildout (Number of Units)
Avalon	2,236	194	2,430
Downtown	4,452	457	4,909
East of 101	0	5,015	5,015
El Camino	2,491	2,524	5,015
Lindenville	925	4,709	5,634
Orange Park	1,304	104	1,408
Paradise Valley/Terra Bay	1,965	189	2,154
Sign Hill	1,185	103	1,288
Sunshine Gardens	2,335	140	2,475
Westborough	4,277	524	4,801
Winston Serra	3,477	353	3,830
Totals	**24,647**	**14,312**	**38,959**

Notes:
* The total number of units under the "Existing" condition includes the 2019 on-the-ground uses (based on California Department of Finance Population and Housing Estimates and South San Francisco GIS data) and projects that are entitled, under review, or under construction.
Source: Shape SSF Growth Projections

Table 2-4: Projected Job Growth at General Plan Update Buildout by Planning Sub-Area

Planning Sub-Areas	Existing (Jobs)*	Projected (Jobs)	General Plan Update Buildout (Jobs)
Avalon	290	0	290
Downtown	3,569	(115)	3,454
East of 101	62,900	36,183	99,083
El Camino	4,005	2,071	6,076
Lindenville	20,078	2,506	22,584
Orange Park	1,062	7	1,069
Paradise Valley/Terra Bay	695	1,540	2,235
Sign Hill	408	0	408
Sunshine Gardens	1,085	0	1,085
Westborough	729	105	834
Winston Serra	439	0	439

Planning Sub-Areas	Existing (Jobs)*	Projected (Jobs)	General Plan Update Buildout (Jobs)
Totals	**95,260**	**42,297**	**137,557**

Notes:
* The total number of jobs under the "Existing" condition includes the 2018 on-the-ground uses (based on California Employment Development Department and South San Francisco GIS data), projects that are entitled, under review, or under construction, and approved plans (e.g., Genentech Master Plan).
Source: Shape SSF Growth Projections

Residential and Population Growth

Residential growth under the General Plan Update is anticipated for a variety of housing sizes and types such as single-family homes and multi-family housing. Table 2-5 shows the number of residential units under the existing and General Plan Update Buildout conditions. As shown in Table 2-5, buildout of the General Plan Update could yield up to 14,312 new residential units within the City.

Table 2-5: Projected Residential Growth at General Plan Update Buildout by Land Use Category

Land Use Designation	Existing (Number of Units)*	Projected (Number of Units)	General Plan Update Buildout (Number of Units)
Residential			
Low Density Residential	10,858	975	11,833
Medium Density Residential	5,371	330	5,701
Medium High Density Residential	2,358	0	2,358
High Density Residential	1,631	300	1,931
Downtown Residential Core	281	48	329
Urban Residential	1,506	1,450	2,956
San Mateo County Low Density Residential (SOI)	61	8	69
Mixed Use			
Low Density Mixed Use	16	499	515
Lindenville Neighborhood Center	44	0	44
Grand Avenue Core	71	5	76
Medium Density Mixed Use	586	1,096	1,682
High Density Mixed Use	1,275	4,452	5,727
East of 101 Mixed Use	0	5,015	5,015
Downtown Transit Core	589	62	651
East of 101 Transit Core	0	72	72
Totals	**24,647**	**14,312**	**38,959**

Land Use Designation	Existing (Number of Units)*	Projected (Number of Units)	General Plan Update Buildout (Number of Units)
Notes: SOI = Sphere of Influence * The total number of units under the "Existing" condition includes the 2019 on-the-ground uses (based on California Department of Finance Population and Housing Estimates and South San Francisco GIS data), and projects that are entitled, under review, or under construction. Source: Shape SSF Growth Projections			

The City's population has increased since 1999, when it had a population of 58,754.[9] The City's current population (2022) is 67,135 people,[10] which represents a 14.3 percent increase over 23 years. South San Francisco households averaged 3.12 persons per household in 2019, approximately 8.7 percent larger than the San Mateo County average of 2.87 persons per household.[11]

As shown in Table 2-5, buildout under the General Plan Update could yield up to 14,312 new residential units. A total of 40,068 new persons would be accommodated under the General Plan Update. At buildout of the General Plan Update, the population of South San Francisco is projected to be approximately 107,203.

Nonresidential and Employment Growth

Nonresidential growth under the General Plan Update is anticipated for Business Technology Park, Mixed Industrial, East of 101 Transit Core, and other development primarily east of US-101 and along the transit corridors. Table 2-6 shows the number of jobs under the existing and General Plan Update Buildout conditions. As shown in Table 2-6, buildout of the General Plan Update could yield up to 42,297 net new jobs within the City.

Table 2-6: Projected Nonresidential Growth at General Plan Update Buildout by Land Use Category

Land Use Designation	Existing (Jobs)*	Projected (Jobs)	General Plan Update Buildout (Jobs)
Nonresidential			
Community Commercial	135	(37)	98
Business Technology Park	30,650	1,627	32,277
Business Technology Park High	24,458	16,198	40,656
Business and Professional Office	11,974	(221)	11,753

[9] State of California Department of Finance. 2007. E-4 Revised Historical City, County and State Population Estimates, 1991-2000, with 1990 and 2000 Census Counts. Website: https://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-4/1991-2000/. Accessed January 29, 2022.

[10] California Department of Finance. 2021. Population Estimate for Cities, Counties, and the State with Annual Percentage Change–January 1, 2020, and 2021. Website: http://dof.ca.gov/Forecasting/Demographics/Estimates/E-1/. Accessed January 29, 2022.

[11] United States Census Bureau. 2019. QuickFacts. Website: https://www.census.gov/quickfacts/fact/table/southsanfranciscocitycalifornia,sanmateocountycalifornia/PST045219. Accessed January 29, 2022.

Land Use Designation	Existing (Jobs)*	Projected (Jobs)	General Plan Update Buildout (Jobs)
Mixed Industrial	663	29	692
Mixed Industrial High	6,199	540	6,739
Industrial Transition Zone	1,080	(128)	952
Mixed Use			
Low Density Mixed Use	2,598	264	2,862
Lindenville Neighborhood Center	98	3	101
Grand Avenue Core	1,292	(12)	1,280
Medium Density Mixed Use	2,323	(196)	2,127
High Density Mixed Use	2,562	3,924	6,486
East of 101 Mixed Use	2,160	1,835	3,995
Downtown Transit Core	600	(68)	532
East of 101 Transit Core	3,426	17,978	21,404
Civic/Other			
Parks and Recreation	40	0	40
Open Space	9	0	9
Public	445	16	461
School	1,762	2	1,764
Low Density Residential	634	0	634
Medium Density Residential	733	(44)	689
Medium-High Density Residential	351	27	378
High Density Residential	23	0	23
Downtown Residential Core	358	(16)	342
Urban Residential	680	576	1,256
San Mateo County Low Density Residential (SOI)	7	0	7
Total	**95,260**	**42,297**	**137,557**

Notes:
* The total number of jobs under the "Existing" condition includes the 2018 on-the-ground uses (based on California Employment Development Department and South San Francisco GIS data), projects that are entitled, under review, or under construction, and approved plans (e.g., Genentech Master Plan).
Source: Shape SSF Growth Projections

Approximately 12.5 percent of South San Francisco's employed residents work in South San Francisco, primarily in service and production jobs. The City provides high concentrations of jobs in the "Manufacturing" (including biotechnology), "Wholesale Trade," and "Transportation and Warehousing" industry sectors, reflecting a mix of biotechnology, production, and distribution jobs.

South San Francisco currently provides 95,260 employment opportunities. The General Plan Update anticipates approximately 42,297 net new employment opportunities, for a total of 137,557 employment opportunities from full buildout of the General Plan Update by 2040.

Residential and Nonresidential Square Footage Growth

Table 2-7 shows the square footage of residential and nonresidential uses under the existing and General Plan Update Buildout conditions. As shown in Table 2-7, buildout of the General Plan Update could yield up to 19,307,414 net new square feet of residential and nonresidential uses within the City.

Table 2-7: Projected Square Footage Growth at General Plan Update Buildout by Land Use Category

Land Use Designation	Existing (Square Feet)*	Projected (Square Feet)	General Plan Update Buildout (Square Feet)
Nonresidential			
Community Commercial	48,950	(3,626)	45,324
Business Technology Park	12,626,790	721,680	13,348,470
Business Technology Park High	10,026,728	7,788,187	17,814,915
Business and Professional Office	2,944,016	67,269	3,011,285
Mixed Industrial	395,160	83,600	478,760
Mixed Industrial High	4,825,973	503,439	5,329,412
Industrial Transition Zone	532,363	(42,247)	490,116
Mixed Use			
Low Density Mixed Use	1,816,900	(6,572)	1,810,328
Lindenville Neighborhood Center	69,900	1,531	71,431
Grand Avenue Core	669,783	4,304	674,087
Medium Density Mixed Use	1,241,025	(263,306)	977,719
High Density Mixed Use	1,291,300	1,334,467	2,625,767
East of 101 Mixed Use	1,853,298	433,685	2,286,983
Downtown Transit Core	137,780	60,273	198,053
East of 101 Transit Core	963,836	8,262,100	9,225,936
Civic/Other			
Parks and Recreation	17,075	0	17,075
Open Space	7,200	0	7,200
Public	109,550	68,367	177,917
School	396,675	613	397,288

Land Use Designation	Existing (Square Feet)*	Projected (Square Feet)	General Plan Update Buildout (Square Feet)
Residential			
Low Density Residential	175,800	0	175,800
Medium Density Residential	209,000	0	209,000
Medium-High Density Residential	87,475	0	87,475
High Density Residential	13,125	7,200	20,325
Downtown Residential Core	134,500	7,200	141,700
Urban Residential	290,029	279,250	569,279
San Mateo County Low Density Residential (SOI)	1,575	0	1,575
Total	**40,885,806**	**19,307,414****	

Notes:
* The total square feet under the "Existing" condition includes the 2018 on-the-ground uses (based on California Employment Development Department and South San Francisco GIS data), projects that are entitled, under review, or under construction, and approved plans (e.g., Genentech Master Plan).
** Assuming nonresidential space from the Mixed-Use area is conservatively estimated to be 50 percent residential and 50 percent nonresidential space, the total net new nonresidential space is projected to be 14,100,523 square feet.
Source: Shape SSF Growth Projections

Civic and Open Space Growth

Civic growth under the General Plan Update is anticipated for Public, School, and Transportation land uses. Open Space growth under the General Plan Update is anticipated as new pedestrian and bicycle connections, new parks, canal improvements, new streets, new bridges, and elevated roadways. Buildout of the General Plan Update could yield new parks, improved open space adjacent to State Route 35, and pedestrian and bicycle connections primarily east of US-101 and along the transit corridors. The General Plan Update includes improvements to the Colma Creek Canal from the BART Station to Oak Avenue and from West Orange Avenue to Produce Avenue. Lastly, the General Plan Update includes new streets and bridges/elevated roadways, additional bus lanes, and new trail connections to improve multimodal transportation and reduce transportation injury collisions.

Policies and Actions With Potential for Environmental Effects

Additionally, implementation of policies and actions contained within the General Plan Update may result in private and public improvements throughout the City. The policies and actions from the General Plan Update with the potential for environmental effects are identified below:

Land Use and Community Design Element

Action LU-1.2.2 Develop infrastructure improvement program for complete neighborhoods. Develop a formal program and structure to evaluate and facilitate the repair, maintenance, and expansion of bicycle, pedestrian, and transit infrastructure in complete neighborhoods.

Policy LU-1.4 Maintain and expand public facilities and services. Maintain and expand public facilities to better support the community, including schools, libraries, utilities, and recreational spaces, particularly in neighborhoods lacking these resources. Seek opportunities to co-locate new public projects near compatible civic uses such as schools and campuses to create nodes of activity and services.

Action LU-2.3.4 Upgrade pedestrian/bicycle scaled lighting. Determine areas where pedestrian- and bicycle-scaled lighting could be installed to create safe and dynamic corridors and destinations

Policy LU-4.4 Improve pedestrian and bicycle connectivity in residential neighborhoods. Link existing residential neighborhoods by providing convenient pedestrian and bicycle connections to nearby destinations, such as parks, public facilities, and shopping centers.

Policy LU-8.2 Create an attractive pedestrian environment. Facilitate a diverse and attractive pedestrian environment through the provision of street furniture, lighting, and other amenities.

Policy LU-8.3 Improve pedestrian connections and sidewalks. Improve pedestrian connections and sidewalk infrastructure across the City, especially between residential and commercial areas, keeping in mind mobility needs of children, families, seniors, and people with disabilities.

Policy LU-8.5 Provide plazas and gathering places. Improve existing and create new plazas and public gathering places throughout the City.

Policy LU-8.7 Improve the Colma Creek public realm. Improve the public realm along Colma Creek to beautify the City and enhance the creek as a recreational amenity.

Policy LU-8.10 Ensure adequate infrastructure and utilities. Ensure adequate infrastructure and utility services (electricity, water, internet) for all future development and when feasible, underground utilities (new and existing) to enhance the public realm.

Sub-Areas Element

Policy SA-5.1 Improve Downtown pedestrian and bicycle network. Construct safe, comfortable, and accessible pedestrian and bicycle facilities that invite people of all ages and abilities to access Downtown amenities and services, Caltrain, Colma Creek and employment in East of 101 and Lindenville through techniques such as sidewalk bulbing, lighting improvements, and signage.

Policy SA-16.3 Create new parks and open spaces in East of 101. Introduce a new, connected park and open space system that includes:

- A public park within a ten-minute walk to any new residential development East of 101.

- A Colma Creek linear park featuring walking and cycling paths.
- A recreational greenway between Airport Blvd and Littlefield Ave.
- A recreational greenway between Forbes Blvd and Oyster Point Blvd that extends into the Genentech Master Plan Area and connects to the San Francisco Bay Trail.
- Class I pedestrian routes that connect East of 101 with Downtown and Lindenville.

Policy SA-24.1 Transform Colma Creek into a walkable amenity. Transform Colma Creek into a walkable amenity for all users by improving sidewalk conditions and incorporating lighting, public art, street furniture, street trees, and landscaping.

Policy SA-31.1 Implement Orange Memorial Park Master Plan. Continue efforts to implement the Orange Memorial Park Master Plan. Continue to implement stormwater capture projects like the Orange Memorial Park updates to improve water quality and increase trash capture in the Colma Creek watershed.

Action SA-31.1.1 Coordinate with Cal Water to purchase or lease land. Coordinate with Cal Water to purchase or lease land along Chestnut Avenue and Colma Creek to expand Orange Park.

Policy SA-31.2 Improve Centennial Way Trail Connections to Orange Park. Improve pedestrian and bicycle connections to the Centennial Way Trail, and to the El Camino Real and Downtown sub-areas.

Action SA-32.4.1 Coordinate with local and regional open space agencies. Collaborate with County of San Mateo Parks Department regarding upkeep and expansion of pedestrian facilities to connect to the San Bruno Mountains.

Policy SA-36.4 Expand parks and walking trails in Westborough. Expand access to parks and active transportation opportunities in Westborough.

Policy SA-38.1 Explore housing development and open space on Serra Vista school site. Work with the South San Francisco Unified School District to evaluate a medium-density housing development and a publicly accessible open space on the former Serra Vista school site.

Action SA-39.1.1 Implement linear parks in Winston Serra. Develop a new linear park as outlined in the Parks and Recreation Master Plan.

Action SA-39.1.2 Develop new park at SFPUC site. Develop a new park on the existing SFPUC site that provides pedestrian connections to Alta Loma Middle School.

Prosperous Economy Element

Action PE-2.1.2 Support infrastructure improvements. Pursue infrastructure and placemaking improvements that enhance the functionality of industrial districts.

Policy PE-4.1 Improve regional access to quality jobs. Support improvements to the transit and transportation network that increase access by South San Francisco residents to middle- and high-wage jobs within the City and region. Refer to the Mobility Element of the General Plan for related policies and actions.

Policy PE-4.3 Provide enhanced multimodal commute options. Continue collaborating with other City departments and regional transportation agencies to provide enhanced multimodal commute options.

Action PE-4.3.1 Expand transit and active transportation alternatives. Maintain efforts to coordinate across departments and agencies to share business concerns about the need for expanded alternatives to automobile access to businesses, including improved bicycle and pedestrian infrastructure and support for regional public transportation improvements.

Mobility and Access Element

Action MOB-1.2.1 Incorporate traffic calming. Incorporate traffic calming treatments into all street projects to support lower design speeds.

Policy MOB-2.1 Incorporate complete streets improvements into all roadway and development projects.

Action MOB-2.1.3 Implement Active South City Pedestrian and Bicycle Plan. All capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans.

Action MOB-2.1.4 Implement transit speed, reliability, and access improvements. All capital improvements and development projects near regional transit stations or bus/shuttle routes incorporate improvements to advance speed, reliability, and access, such as in-lane farside bus stops, bus-only lanes, queue jumps, and pedestrian/bicycle gap closures.

Action MOB-2.1.5 Address ADA accessibility. Address ADA accessibility gaps in the City's transportation infrastructure, including at sidewalks, curb ramps, crosswalks, and bus stops.

Action MOB-3.2.2 Incorporate new street connections. Incorporate new street connections to better distribute vehicle trips across South San Francisco's street network, especially in the East of 101 Area.

Action MOB-4.1.2 Expand transit service. Continue collaboration with Caltrain, SamTrans, Water Emergency Transportation Authority (WETA), and shuttle providers to scale service levels in growing areas. Consider independently operated transit services to fill regional transit gaps.

Action MOB-4.1.4 Incorporate first/last-mile connections. Incorporate first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.

Policy MOB-5.1 Expand the low-stress bike and pedestrian network. Capitalize on opportunities to expand the low-stress bike and pedestrian network throughout the City.

Action MOB-5.1.1 Complete rails to trails projects. Leverage public-private partnerships to complete the conversion of the City's freight rail lines to multiuse trails.

Action MOB-5.1.2 Develop Bikeways and slow streets. Grow network of low stress bikeways and Slow Streets that prioritize direct access to recreation and active transportation within the City's residential neighborhoods.

Policy MOB-5.2 Enhance access to the trail network. Enhance access to Centennial Way Trail, Bay Trail, and other trail facilities through streetscape projects and new developments.

Abundant and Accessible Parks and Recreation Element

Policy PR-1.5 Use underutilized spaces for recreational services. Seek opportunities to use vacant and underutilized commercial and industrial buildings for recreational services, especially in disadvantaged communities.

Policy PR-2.2 Use underutilized sites for improved parks. Add improved parkland by improving existing underused sites, such as surface parking lots, to create new green space, recreation, and gathering areas in the parks system. Consider using sites as temporary/pop-up parks to meet near term needs.

Policy PR-3.1 Meet open space standard: Maintain a network of open spaces that achieves a standard of 1.5 acres of open space per 1,000 residents, preserving and seeking opportunities to expand open spaces areas like Sign Hill, along the San Francisco Bay and Colma Creek, and in other areas identified on Figure 31, while ensuring open spaces are accessible to people of all ages and abilities and support urban ecology.

Policy PR-3.3 Create new public access points to open spaces. Seek opportunities to create new public access points to Sign Hill, San Bruno Mountain State and County Park, and the San Francisco Bay Trail and parks.

Policy PR-4.3 Partner with South San Francisco Unified School District to transform former school sites. Partner with South San Francisco Unified School District to support the

conversion of former school sites like Foxridge and Serra Vista to park space, childcare facilities, and multi-family housing.

Policy PR-4.6 Convert public easements. Work with other agencies, including PG&E, the California Water Service, San Francisco Public Utilities Commission, and to convert public easements, such as utility corridors or unused rights-of-way, into parks and trails.

Policy PR-4.7 Provide publicly accessible, private open space. Work with nonresidential development projects in the East of 101, Lindenville, and El Camino sub-areas to provide publicly accessible private maintained open space as part of a developer agreement, Memorandum of Understanding, or similar legally binding agreement with the City. Establish standards for private parks so that their quality is on par with public parks. Require the identification of an entity responsible for park maintenance, adoption of maintenance standards and guarantees of a funding source for long-term maintenance.

Policy PR-5.1 Create downtown network of parks. Building on the Cypress and Pine Playlot, City Hall Tot Lot, and City Hall open space, create a network of mini parks, green streets, plazas, and other public open spaces Downtown and develop a clearly marked system of walkways to connect these spaces.

Policy PR-5.2 Expand Downtown park acquisition opportunities. Seek opportunities to acquire property, including former Redevelopment Agency sites, utility rights-of-way, and other vacant and underutilized properties to convert into parkland in Downtown.

Policy PR-6.1 Maintain and expand trail connectivity. Maintain and expand an interconnected network of trails, greenways, and active transportation.

Policy PR-6.2 Connect parks to trails. When possible, connect parks, recreational facilities, and open spaces to the trail network and Class 1 bicycle connections identified in the Active South City Plan.

Policy PR-6.4 Provide sidewalk, trail, and transit links to parks. Provide complete sidewalk networks to serve local parks. Improve the usefulness of transit as a way of getting to parks. Expand tree canopy cover to increase environmental benefits.

Policy PR-6.5 Improve trail amenities and safety. Ensure trails have seating, shade, signage, stroller trails, and other amenities. Improve trail safety with appropriate lighting and better pedestrian and bicycle access.

Policy PR-7.2 Maintain park and recreation facilities. Fund adequate resources to maintain existing and future parks and recreational facilities to extend their useful lifetimes.

Policy PR-7.3 Maintain park amenities. Maintain high quality amenities for active and passive recreational use in parks, including playgrounds, fields, and sport courts, and suitability of use by younger children, including childcare provider groups.

Policy PR-7.4 Upgrade playgrounds. Continue to renovate existing playgrounds to update play features and add play elements to existing open spaces where feasible.

Policy PR-7.5 Redesign underused parks. Continue to redesign underused parks to update programming to attract more users where feasible.

Policy PR-7.6 Modernize aquatics facilities. Seek opportunities to replace and expand the indoor pool at Orange Park to continue to provide benefits from aquatics programming.

Community Health and Environmental Justice Element

Policy CHEJ-2.2 Encourage urban agriculture. Encourage edible landscapes, fruit trees, and community gardens in the City's parks and public spaces through implementation of the Urban Forest Management Plan and Parks Master Plan.

Action CHEJ-4.1.2 Precautions for Oyster Point Landfill. Implement any future City-prepared sea level rise adaptation plan for the Oyster Point Marina and landfill to prevent the release of toxins into the Bay.

Community Resilience Element

Action CR-1.6.2 Upgrade the Emergency Operations Center. Add second floor to the City's Emergency Operations Center (EOC) and a warehouse to store supplies to support the City in the event of a disaster. Ensure the EOC has the necessary capabilities and can continue operations after all future hazards.

Action CR-2.2.1 Pursue shoreline protection for existing and future development. Continue ongoing collaboration with the United States Army Corps of Engineers to protect existing and future development by raising levees or seawalls in accordance with the Continuing Authorities Program Study. Implement any future City-prepared sea level rise adaptation plan for the Oyster Point Marina and landfill.

Action CR-2.2.2 Use nature-based solutions for ecosystem resilience. Explore nature-based solutions appropriate for the South San Francisco shoreline, particularly at the mouth of Colma Creek, to provide protection for the built environment and ecosystems.

Action CR-3.1.1 Implement Colma Creek adaptation pilot. Develop a program to work with public and private landowners to decrease the risk of flooding by implementing engineered and nature-based shoreline protection projects in coordination with watershed management projects that reduce and/or store runoff during rainfall events and improve the condition of the flood plain.

Action CR-6.3.1 Identify heat island priority areas. Identify areas of greatest risk of urban heat island effect and target resources in these areas, including tree planting, cool roofs, and installation of cool pavement.

Climate Protection Element

Policy CP-2.3 Develop community solar projects. Explore the development of community solar projects.

Policy CP-2.4 Install energy resilience infrastructure. Provide energy resilience via backup energy systems, microgrids, and other measures that serve the community during emergency events, particularly supporting disadvantaged communities, including considering creating a financial incentive program for existing and new solar/battery backup system installations.

Policy CP-4.2 Prepare a Building Electrification Plan. Develop a date certain, phased-in Existing Building Electrification Plan to retrofit existing homes and businesses to all electric.

Policy CP-5.6 Electric vehicle chargers at municipal facilities. Seek opportunities to install additional electric vehicle chargers at suitable public facilities, including Downtown parking structures and community and regional parks.

Policy CP-7.1 Protect and expand wetland habitat. Protect and expand existing marsh and wetland habitat to improve water quality, adapt to climate change, and provide habitat for wildlife.

Environmental and Cultural Stewardship Element

Policy ES-1.3 Create a connected network of wildlife corridors. Transform Colma Creek, implement the City's Urban Forest Master Plan, and manage the Bay Trail and Centennial Way to create a connected network of wildlife corridors.

Policy ES-3.1 Enhance Colma Creek as an ecological corridor. Enhance Colma Creek as an ecological corridor, restoring creek ecologies and creating transitional habitat zones to build resilience and ecosystem services

Policy ES-7.1 Develop and implement comprehensive watershed management strategy. Partner with regional and local agencies to develop a comprehensive watershed management strategy that identifies programs, partnerships, actions, and incentives that the City and partners can take to protect the City's water resources and aquatic areas. Collaborate with regional agencies and neighboring jurisdictions to manage stormwater, reduce impervious surfaces, and improve water quality in the Colma Creek watershed.

Action ES-7.2.1 Implement the Green Infrastructure Plan. Implement the City's Green Infrastructure Plan.

2.5.3 - Policy Updates to the General Plan Update

A number of major policies from documents which were previously adopted are integrated into the proposed project—specifically the General Plan Update and the Zoning Code Amendments. These major policies include concepts from the following documents:

- East of 101 Area Plan (superseded by General Plan Update)
- El Camino Real/Chestnut Avenue Master Plan (superseded by General Plan Update)
- El Camino Real Area Plan (superseded by General Plan Update)
- South San Francisco BART Transit Village Plan (superseded by General Plan Update)
- Terrabay Specific Plan (superseded by General Plan Update)
- Bay West Cove Specific Plan (superseded by General Plan Update)
- Downtown Station Area Specific Plan (superseded by General Plan Update)
- Gateway Specific Plan (superseded by General Plan Update)

The plans listed above are superseded with the adoption of the proposed project.

2.5.4 - Overview of General Plan Elements

The State of California requires that the General Plan contain eight mandatory elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, Safety, and Environmental Justice. The South San Francisco General Plan Update will include all of the State-mandated elements and three optional elements, as described below.

Land Use and Community Design Element

This element provides a framework for the land use designations and the standards for density, intensity, and design, in order to maximize opportunities for residential infill development, encourage mixed-use residential, retail, and office uses near Caltrain and BART stations, and maintain the Downtown as the symbolic center of the City. This element includes a land use map for the Planning Area and associated land use categories under the General Plan Update. It expands on and complements the community design and development guidelines established for the City's residential neighborhoods, commercial/office, industrial, and mixed-use districts, and identifies citywide design guidelines.

Sub-Areas Element

This element describes the vision, guiding policy, and implementation actions for the following neighborhood sub-areas: Westborough, Winston Serra, Avalon and Brentwood, El Camino Real, Sunshine Gardens, Orange Park, Sign Hill, Terrabay and Paradise Valley, Downtown, Lindenville, and East of 101.

Housing Element

This element adopts a comprehensive, long-term plan to address the housing needs of the City and provide suitable, decent, and affordable housing for residents, as well as preserve and enhance existing residential areas. The 2015-2023 Housing Element was adopted in April 2015 and is valid until 2023 and will reflect the updated RHNA numbers being finalized this year. The process of

updating the existing Housing Element is underway and is being conducted simultaneously to, but not analyzed as part of, this General Plan Update.

Prosperous Economy Element

This element provides a framework to promote business diversification, create an innovation district, retain local businesses, promote early childhood development, and provide jobs training.

Mobility and Access Element

This element focuses on enhancing the City's existing circulation and transportation system and contains policies and actions to provide increased access to mobility services, including transit, bike and pedestrian networks, access between neighborhoods, and traffic safety. This element identifies long-term opportunities to promote a multimodal, safe, and efficient circulation system that will address traffic congestion, encourage increased transit use, and respond to local business needs. This element also establishes guidance for pedestrians and bicyclists to use the network of streets for travel and recreational purposes.

Abundant and Accessible Parks and Recreation Element

This element addresses the provision of public services and facilities, libraries, parks, and recreational facilities and includes future infrastructure planning.

Community Health and Environmental Justice Element

This element includes policies celebrating the cultural diversity of South San Francisco, access to health care and food, social equity and environmental justice concerns, and social services. This element identifies disadvantaged communities within the Planning Area and establishes goals and policies to address the unique health risks, such as exposure to air pollutants and noise, to reduce impacts, and to advance equity and protect human health in all areas of the City. This element includes policies to promote civic engagement in the public decision-making process as well as goals and policies to promote safe and sanitary homes throughout the City.

Community Resilience Element

This element establishes a framework of proactive and coordinated programs to protect against foreseeable natural and human-caused hazards. It includes goals and policies pertaining to emergency preparedness and programming, police and fire personnel, and utilization of facilities within the City. This element is intended to identify the existing natural and human-caused hazards that are reasonably foreseeable within the City, including seismic and geologic hazards, fire hazards, flooding, hazardous sites and materials, public safety services, and emergency management. The Community Resilience Element also evaluates strategies, goals, and programs to manage risks to people, property, infrastructure, associated that may arise from foreseeable natural and human-caused hazards. This element also addresses potential hazards related to sea level rise and inland flooding, as well as considering how climate change could affect and potentially exacerbate the impacts associated with other hazards.

Equitable Community Services Element

This element addresses engaging all residents, analyzing, and improving policies and programs. It focuses on being a leader across jurisdictions and departments to incorporate equity considerations into policies and programs and engaging residents in decisions that impact their lives.

Climate Protection Element

This element includes an integrated policy framework for sustainability, GHG emissions mitigation, and carbon sequestration. This includes goals and policies for reducing GHG emissions, such as carbon-free energy, decarbonized buildings, zero waste, fossil-fuel free transportation, and carbon sequestration. Given the cross-cutting nature of these issues, there will be points of integration with other policy frameworks, including Land Use, Community Resilience, Conservation, and Social Equity, among others.

Environmental and Cultural Stewardship Element

This element identifies policies and actions to address the conservation, development, and use of natural resources, protect sensitive cultural and historic resources, improve water quality and stormwater management, address air quality, and enhance open space areas including Colma Creek and the shoreline.

Noise Element

This element includes policies and actions to preserve the quality of life and reduce potential noise exposure to persons living and working in the City. The intent of the noise element is to establish a pattern of land uses that minimizes the exposure of community residents to excessive noise while continuing to provide high-quality transit opportunities. This noise element also includes goals, policies, and actions to protect sensitive land uses and historic structures from construction-related vibration.

2.5.5 - Zoning Code Amendments

The proposed project includes amendments to the Zoning Code necessary to implement the General Plan Update. Sections of the Code to be amended include, but are not limited to, the following:

- *Updated Base Zoning Districts and Regulations (Chapters 20.080–20.130)*. The revised list of districts will be based on General Plan Update land use designations. New and revised content includes development standards, use regulations, and design standards.
- *Addition of Form-based Zones (Chapter 20.135)*. Code amendments will introduce a form-based component to the Code, or “Transect” zones and related standards, to support development in select areas of the City.
- *Streamlining of Overlay Zones (Chapters 20.140–20.250)*. Code amendments will generally reduce the number of overlay, plan district, and area plan zones. Amendments will also include the addition of a Sea Level Rise Overlay zone to address resiliency of areas affected by sea level rise.

- *Update of General Development Standards (Chapters 20.300–20.340)*. Sections to be updated include Signs, Wireless Communication, and Transportation Demand Management. A Community Benefits chapter will be added.
- *Update of Administration and Procedures (Chapters 20.440–20.580)*. Amendments include the introduction of a Minor Modification procedure and revisions to the Design Review criteria and procedures.
- *Update of Definitions and Use Classifications (Chapters 20.620–20.630)*. Amendments include updates to definitions and uses needed to reflect contemporary trends and support the revised use tables and standards.

2.5.6 - Overview of Climate Action Plan

Recognizing the important role that cities play in the transition to a low-carbon economy, South San Francisco is preparing a CAP as a roadmap for achieving community-wide GHG emissions reductions. South San Francisco's CAP is a proactive step toward addressing the climate challenge to protect future generations before climate change becomes irreversible. The CAP includes a quantitative inventory and analysis of emissions, starting with 2017 as the baseline year through to a projection of emissions for 2040, the time horizon of the General Plan Update.

The City's CAP is designed to provide clear policy guidance to City staff and decision-makers on how to reduce GHG emissions. It identifies a pathway to reduce emissions consistent with State-level emissions reduction targets. This path includes strategies for decarbonizing buildings, increasing the City's renewable energy supply, sequestering carbon, reducing transportation demand from single-occupancy vehicles, increasing active transportation modes, and reducing solid waste, among others.

Actions With Potential for Environmental Effects

Additionally, implementation of the actions contained within the CAP may result in private and public improvements throughout the City. The actions from the CAP with the potential for environmental effects are identified below:

Action CE 1.4 Energy resilience via backup energy systems, microgrids, and other measures. Provide energy resilience via backup energy systems, microgrids, and other measures that serve the community during emergency events, particularly supporting disadvantaged communities, including considering creating a financial incentive program for existing and new solar/battery backup system installations.

Action CE 1.6 Community scale solar and other renewable energy. Explore the opportunities to install community scale solar PV or other renewable energy systems including biogas to support local energy resiliency and provide renewable energy to disadvantaged communities.

Action BE 1.5 Deep energy retrofits. Work with PG&E and PCE to implement deep retrofits in the existing building stock, focusing resources in the most disadvantaged communities.

Action BE 1.8 Transition to carbon-free backup power. Work with PG&E and PCE to transition backup generators from diesel to carbon-free sources including battery storage systems.

Action BE 2.1 Existing Building Electrification Plan. Develop a date certain, phased-in Existing Building Electrification Plan to retrofit 90% of existing homes and businesses to all electric by 2040.

Action TL 1.1 Electric Vehicle Charging Reach Code. Implement EV reach code.

Action TL 1.2 Electric Vehicle Chargers at Municipal Facilities. Seek opportunities to install additional electric vehicle chargers at suitable public facilities, including Downtown parking structures and community and regional parks.

Action TL 2.8 Improve Transit Station Access. Leverage public-private partnerships to increase transit ridership and improve transit station access by incorporating first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.

Action WW 1.2 Alternative Water Sources. Explore options at the South San Francisco–San Bruno Water Quality Control Plant for delivering non-potable, recycled water for cooling towers, processes, and irrigation in East of 101 (e.g., flow pipe water). Maximize available non-potable water reuse from Orange Park Stormwater Capture project, at Orange Memorial Park, Centennial Way, and new Civic Campus.

Action CS 1.1 Carbon Farming. Explore compost application on available acres of appropriate open space.

Action CL 1.5 Energy resilience of municipal buildings. Require municipal building and facility new construction and major renovation projects to evaluate the feasibility of incorporating on-site batteries that store electricity from on-site renewable energy generation to supply the building and community with electricity in the event of a disaster.

Action CS 3.1 Colma Creek Restoration. Enhance Colma Creek as an ecological corridor, restoring 5 miles of creek ecologies and creating transitional habitat zones to build resilience and ecosystem services. Protect and expand existing marsh and wetland habitat to improve water quality, adapt to climate change, and provide habitat for wildlife.

2.5.7 - Required Discretionary Approvals

The City of South San Francisco is the lead agency for the proposed project. The proposed project will be presented to the Planning Commission for review and recommendation to the City Council for comment, review, and consideration for adoption. The City Council has the sole discretionary authority to approve and adopt the proposed project. In order to approve the proposed project, the City Council would consider the following actions:

- Certification of the General Plan Update, Zoning Code Amendments, and Climate Action Plan Final EIR.
- Adoption of required CEQA findings.
- Adoption of a Mitigation Monitoring and Reporting Program.
- Adoption of the General Plan Update.
- Adoption of Zoning Code Amendments.
- Adoption of the Climate Action Plan.

2.5.8 - Subsequent Use of the Draft Program EIR

This Draft Program EIR provides a review of environmental effects associated with implementation of the proposed project. When considering subsequent activities under the proposed project, the City of South San Francisco would utilize this Draft Program EIR as the basis in determining potential environmental effects and the appropriate level of environmental review, if any, of a later activity. Projects or activities successive to this Draft Program EIR may include, but are not limited to, the following:

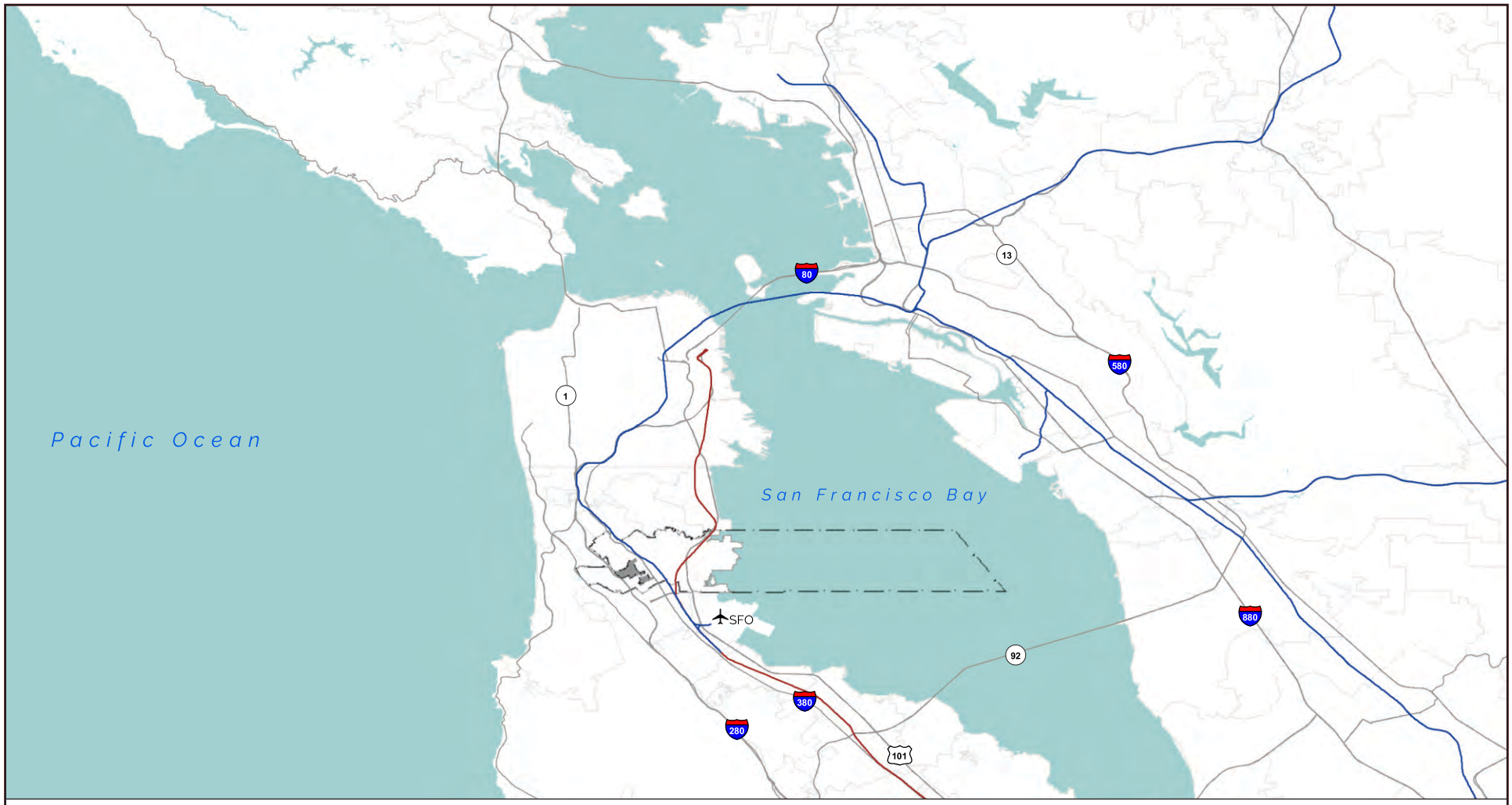
- Approval and funding of major projects and capital improvements.
- Future Planned Unit Development approvals.
- Revisions to the South San Francisco Zoning Ordinance.
- Development Plan approvals, such as tentative subdivision maps, variances, conditional use permits, and other land use permits.
- Development Agreements.
- Property rezoning consistent with the General Plan Update.
- Permit issuances and other approvals necessary for public and private development projects.
- Issuance of permits and other approvals necessary for implementation of the General Plan Update.

2.5.9 - Other Governmental Agency Approvals

City approval of the proposed project would not require any actions or approvals by other public agencies. Subsequent projects and other actions to support implementation of the proposed project would require actions, including permits and approvals, by other public agencies that may include, but are not necessarily limited to:

- California Department of Fish and Wildlife (CDFW) approval of potential future streambed alteration agreements, pursuant to the Fish and Game Code. Approval of any future potential take of State-listed wildlife and plant species covered under the California Endangered Species Act (CESA).

- California Department of Transportation (Caltrans) approval of projects and encroachment permits for projects affecting State highway facilities.
- Regional Water Quality Control Board (RWQCB) approval for National Pollutant Discharge Elimination System (NPDES) compliance, including permits pursuant to the Clean Water Act and Storm Water Pollution Prevention Plan (SWPPP) approval and monitoring.
- San Mateo County Local Agency Formation Commission (LAFCo) approvals for annexation of land within the SOI to the City of South San Francisco.
- United States Army Corps of Engineers (USACE) approval of any future wetland fill activities or dredging permits pursuant to the Clean Water Act.
- United States Fish and Wildlife Service (USFWS) approvals involving any future potential take of federally listed wildlife and plant species and their habitats, pursuant to the Federal Endangered Species Act.
- San Francisco Bay Conservation and Development Commission (BCDC) approval for any proposed fill (earth of any other substance or material, including pilings or structures placed on pilings, and floating structures moored for extended periods of time); extraction of materials; or change in use of any water, land, or structure within the BCDC's jurisdiction.
- San Francisco Public Utilities Commission (SFPUC) approval for any projects or activities within SFPUC property or near SFPUC infrastructure.
- City/County Associations of Governments of San Mateo County (C/CAG) review of the General Plan Update for consistency with the Comprehensive Airport Land Use Compatibility Plan for the Environs of the San Francisco International Airport.
- Conveyance or acquisition of real property and/or real property interests.



Jurisdictional Boundary

- City of South San Francisco
- Other City Boundaries
- Sphere of Influence

Transportation Features

- BART
- Caltrain
- Highway

Source: Raimi + Associates, November 2019.

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0 3 6 12 Miles

Exhibit 2-1
Regional Context Map

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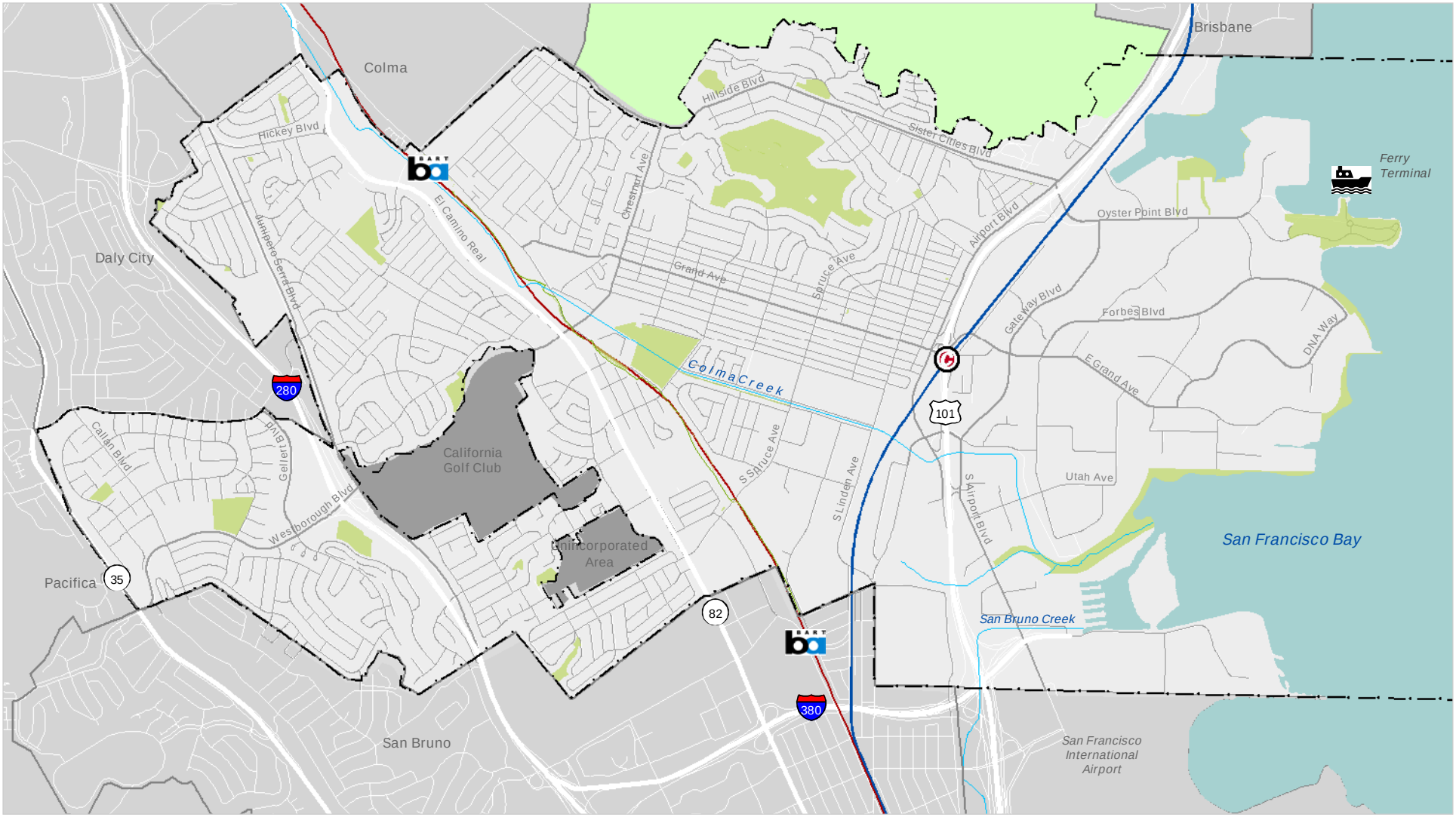

Jurisdictional Boundary

- City of South San Francisco
- Other City Boundaries
- Sphere of Influence

Transportation Features

- BART
- Caltrain
- Highway
- Arterial
- Local Street

Legend

- Streams
- Centennial Way Trail
- Parks/Open Space
- San Bruno Mountain State and County Park

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3,000 1,500 0 3,000 Feet

Exhibit 2-2
Local Vicinity Map

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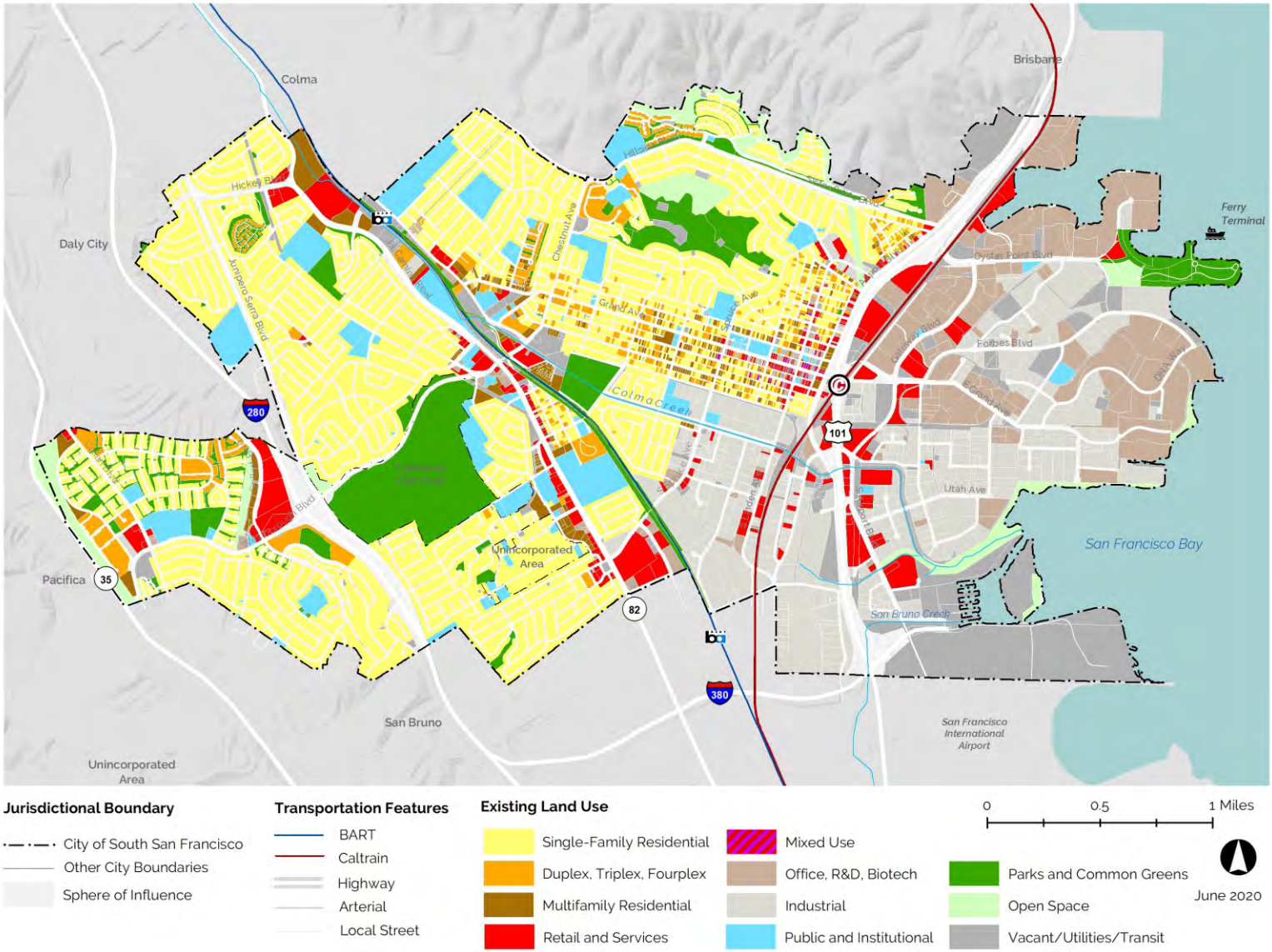

Jurisdictional Boundary

- City of South San Francisco
- Other City Boundaries
- Sphere of Influence

Transportation Features

- BART
- Caltrain
- Highway
- Arterial
- Local Street

Existing Land Use

- Single-Family Residential
- Duplex, Triplex, Fourplex
- Multifamily Residential
- Retail and Services
- Mixed Use
- Office, R&D, Biotech
- Industrial
- Public and Institutional
- Parks and Common Greens
- Open Space
- Vacant/Utilities/Transit

0 0.5 1 Miles

June 2020

Source: Raimi + Associates, June 2020.

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Exhibit 2-3
Existing Land Use Map

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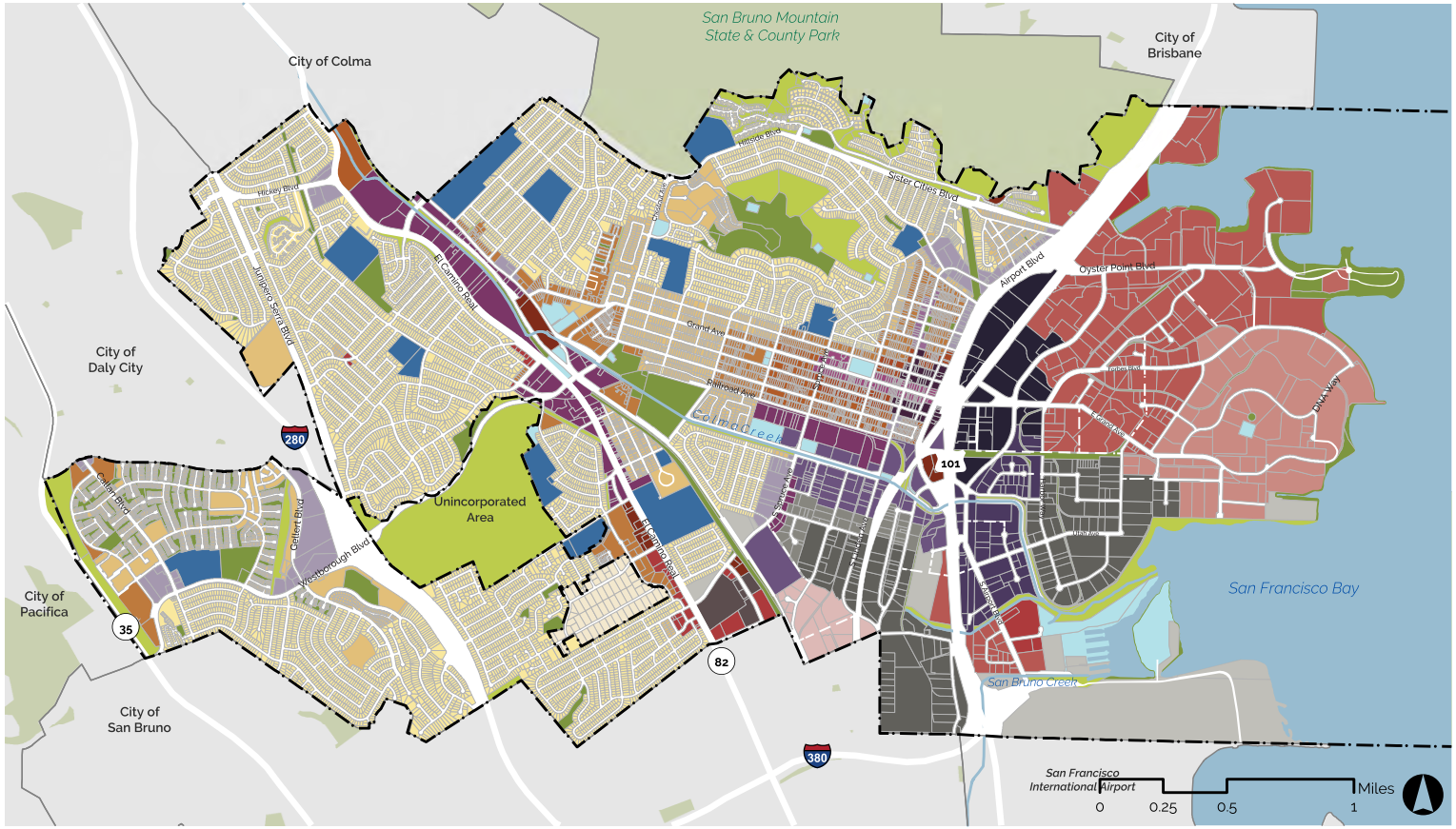

Residential

- San Mateo County Low Density Residential
- Low Density Residential
- Medium Density Residential
- Medium High Density Residential
- High Density Residential
- Downtown Residential Core
- Urban Residential

Non-Residential

- Business and Professional Office
- Business Technology Park
- Business Technology Park High
- Community Commercial
- Oyster Point Coastal Commercial

Mixed Use

- Low Density Mixed Use
- Linden Neighborhood Center
- Grand Avenue Core
- Medium Density Mixed Use
- High Density Mixed Use
- East of 101 Mixed Use
- Downtown Transit Core
- East of 101 Transit Core
- Mixed Industrial
- Mixed Industrial High
- Industrial Transition Zone

Civic/Other

- Public
- School
- Parks and Recreation
- Open Space
- Transportation
- Planned Development
- Streams
- Proposed Network Updates & Revisions

Source: Raimi + Associates, 2022.

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Exhibit 2-4
Proposed Land Use Map

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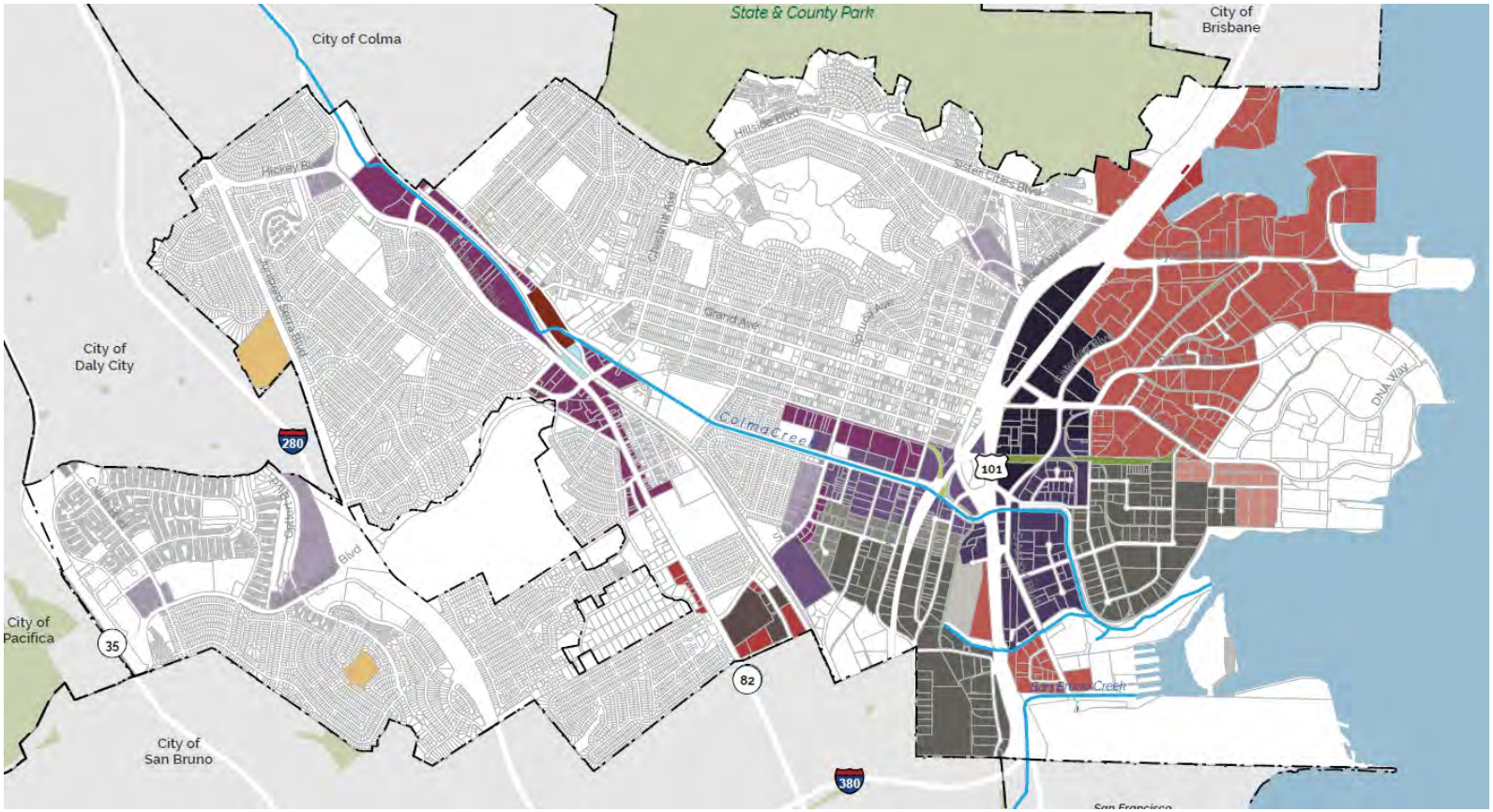

Residential

- San Mateo County Low Density Residential
- Low Density Residential
- Medium Density Residential
- Medium High Density Residential
- High Density Residential
- Downtown Residential Core
- Urban Residential

Non-Residential

- Business and Professional Office
- Business Technology Park
- Business Technology Park High
- Community Commercial
- Oyster Point Coastal Commercial

Mixed Use

- Low Density Mixed Use
- Linden Neighborhood Center
- Grand Avenue Core
- Medium Density Mixed Use
- High Density Mixed Use
- East of 101 Mixed Use
- Downtown Transit Core
- East of 101 Transit Core
- Mixed Industrial
- Mixed Industrial High
- Industrial Transition Zone

Civic/Other

- Public
- School
- Parks and Recreation
- Open Space
- Transportation
- Planned Development
- Streams
- Proposed Network Updates & Revisions

Source: Raimi + Associates, 2022.

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Exhibit 2-5
Proposed Land Use Map - Changes Only From Existing Land Use Map

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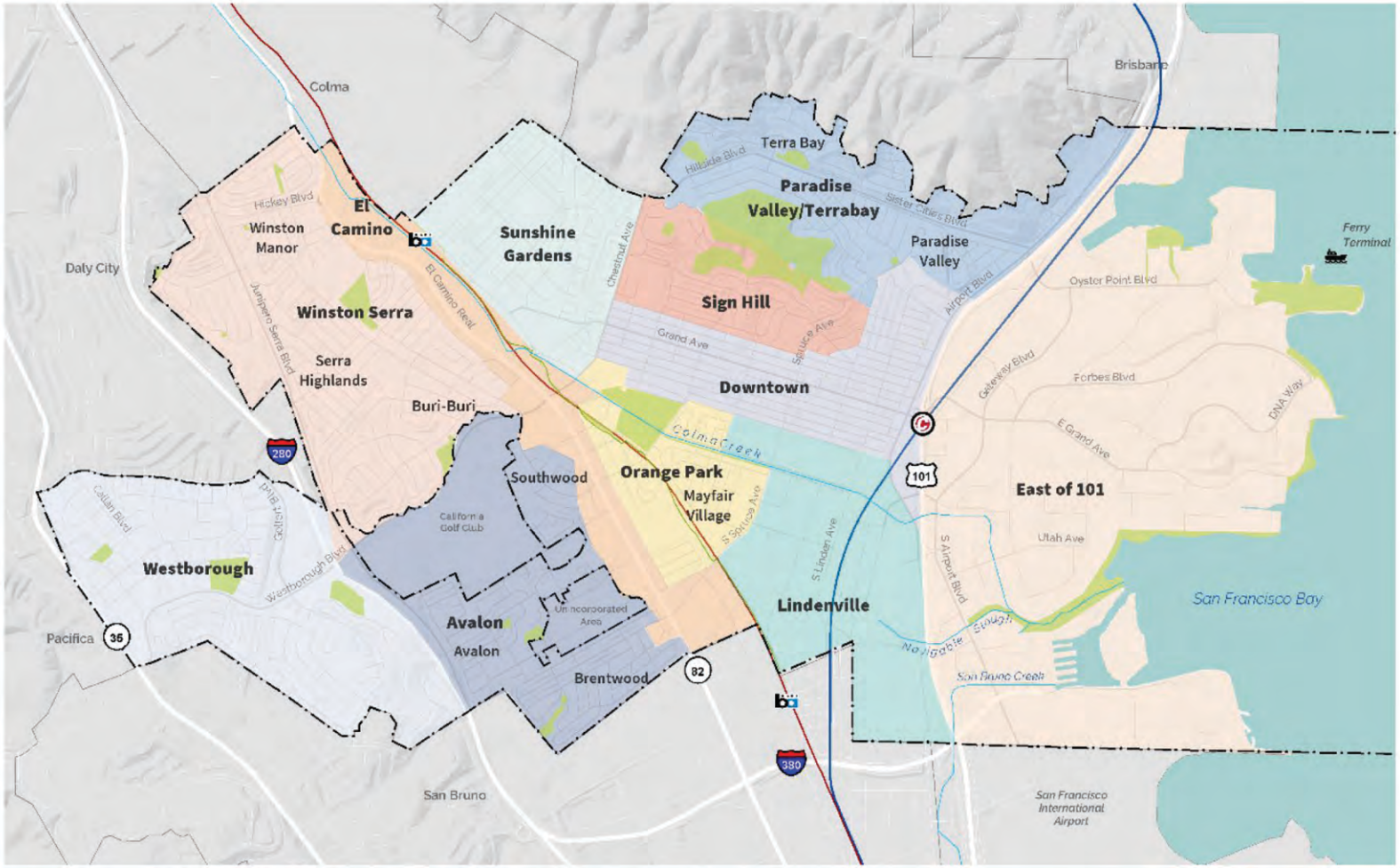

Source: City of South San Francisco General Plan Update

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Exhibit 2-6
Planning Sub-Areas

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CHAPTER 3: ENVIRONMENTAL IMPACT ANALYSIS

Organization of Issue Areas

This chapter sets forth the physical and regulatory environmental setting and addresses the environmental impacts of the proposed project with respect to 16 environmental resource areas. The discussions of the environmental setting describe the present physical conditions, or baseline conditions, in the South San Francisco Planning Area (Planning Area).

According to Section 15125 of the California Environmental Quality Act (CEQA) Guidelines, an Environmental Impact Report (EIR) must include a description of the existing physical environmental conditions in the vicinity of the project to provide the "baseline condition" against which project-related impacts are compared. Normally, the baseline condition is the physical condition that exists when the Notice of Preparation (NOP) is published. The revised NOP for the proposed project was published January 14, 2022. The CEQA Guidelines recognize that the date for establishing an environmental baseline cannot be rigid. Because physical environmental conditions may vary over a range of time periods, the use of environmental baselines that differ from the date of the NOP is reasonable and appropriate when doing so results in a more accurate environmental analysis. Unless otherwise noted, the baseline year (2022) is used for all impact areas analyzed in this Draft Program Environmental Impact Report (Draft Program EIR) to determine impacts. For analytical purposes, impacts associated with implementation of the proposed project are derived from the environmental setting of 2022. This Draft Program EIR presents and analyzes the proposed allowable growth scenario within the Planning Area from 2022 through a planning horizon of 2040.

Environmental Topics Addressed in this Draft Program EIR

The following environmental issues are addressed in Chapter 3:

- Aesthetics, Light, and Glare
- Air Quality
- Biological Resources
- Cultural Resources and Tribal Cultural Resources
- Energy
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population, Housing and Employment
- Public Services and Recreation
- Transportation
- Utilities and Service Systems
- Wildfire

Format of the Environmental Analysis

Each resource area analyzed in this chapter includes the subsections summarized below.

Introduction

This subsection summarizes what will be discussed in the respective environmental topic section, states what informational documents are used as the basis for the section, and indicates what related comments, if any, were received during the EIR public scoping period.

Environmental Setting

This subsection describes the existing, baseline physical conditions of the project site and surroundings (e.g., existing land uses, transportation conditions, noise environment) with respect to each resource topic at the time the NOP was issued. Conditions are described in sufficient detail and breadth to allow a general understanding of the environmental impacts of the proposed project.

Regulatory Framework

This subsection describes the relevant federal, State, and local regulatory requirements that are directly applicable to the environmental topic being analyzed.

Impacts and Mitigation Measures

This subsection evaluates the potential for the proposed project to result in direct and indirect adverse impacts on the existing physical environment, with consideration of both short-term and long-term impacts. The analysis covers all phases of the proposed project, including construction and operation. The significance thresholds for environmental impacts are defined at the beginning of this subsection, and the discussion of the approach to the analysis explains how the significance thresholds have been applied to evaluate the impacts of the proposed project.

Indirect impacts are discussed only for those resources for which they have the potential to occur (e.g., cultural resources, air quality, and biological resources). Both project-level and cumulative impacts are analyzed. Project-level impacts could result from actions related to implementation of the proposed project. Cumulative impacts could result from implementation of the proposed project in combination with other cumulative projects in the study area.

Impacts are analyzed and the respective assessment and findings are included in this Draft Program EIR, applying the following levels of significance:

- **No impact.** A conclusion of No Impact is reached if no potential exists for impacts or if the environmental resource does not occur in the project area or the area of potential impacts.
- **Less than significant impact.** This determination applies if the impact does not exceed the defined significance criteria or would be eliminated or reduced to a less than significant level through compliance with existing local, State, and federal laws and regulations. No mitigation is required for impacts determined to be less than significant.
- **Less than significant impact with mitigation incorporated.** This determination applies if the proposed project would result in a significant impact, exceeding the established significance criteria, but feasible mitigation is available that would reduce the impact to a less than significant level.

- **Significant and unavoidable impact with mitigation.** This determination applies if the proposed project would result in an adverse impact that exceeds the established significance criteria, and although feasible mitigation might lessen the impact, the residual impact would be significant, and, therefore, the impact would be unavoidable.

- **Significant and unavoidable impact.** This determination applies if the proposed project would result in an adverse impact that exceeds the established significance criteria, and no feasible mitigation is available to reduce the impact to a less than significant level. Therefore, the residual impact would be significant and unavoidable.

Impacts are defined in terms of their context and intensity. Context is related to the uniqueness of a resource; intensity refers to the severity of the impact. Where applicable, Best Management Practices (BMPs) or project improvement measures, or both, are incorporated into the proposed project to limit the potential for a significant impact. Where necessary, mitigation measures are identified for significant impacts to limit the degree or lower the magnitude of the impact; rectify the impact by repairing, rehabilitating, or restoring the affected environment; or compensate for the impact by replacing or providing substitute resources or environments. These impacts conclude with a finding of "Less than significant impact with mitigation incorporated." Where no mitigation measures are necessary, relevant impacts are concluded to be a "Less than significant impact" or to have "No impact."

As part of the impact analysis, mitigation measures are identified, where feasible, for impacts considered significant or potentially significant consistent with CEQA Guidelines Section 15126.4, which states that an EIR "shall describe feasible measures which could minimize significant adverse impacts." CEQA requires that mitigation measures have an essential nexus and be roughly proportional to the significant impact identified in the EIR. The project applicant or sponsor is required to implement all mitigation measures identified in this chapter, and the lead agency (in this case the City of South San Francisco) is responsible for overseeing the project applicant's implementation of such mitigation measures. Pursuant to CEQA Guidelines Section 15126.4, mitigation measures are not required for environmental impacts that are found not to be significant.

Impacts are numbered and shown in bold type. The corresponding mitigation measures, where identified, are numbered and indented, and follow the impact statements. Impacts and mitigation measures are numbered consecutively within each topic and include an abbreviated reference to the impact section (e.g., "LAND" for Land Use and Planning). The following abbreviations are used for individual topics:

- Aesthetics, Light, and Glare (AES)
- Air Quality (AIR)
- Biological Resources (BIO)
- Cultural Resources and Tribal Cultural Resources (CUL)
- Energy (ENER)
- Geology, Soils, and Seismicity (GEO)
- Greenhouse Gas Emissions (GHG)
- Hazards and Hazardous Materials (HAZ)

- Hydrology and Water Quality (HYD)
- Land Use and Planning (LAND)
- Noise (NOI)
- Population, Housing, and Employment (POP)
- Public Services and Recreation (PUB)
- Transportation (TRANS)
- Utilities and Service Systems (UTIL)
- Wildfire (WILD)

Cumulative Impacts

The discussion of cumulative impacts in this subsection analyzes the cumulative impacts of the proposed project, taken together with other past, present, and reasonably foreseeable future projects producing related impacts. The goal of this analysis is to determine whether the overall long-term impacts of all such projects would be cumulatively significant, and to determine whether the proposed project itself would cause a "cumulatively considerable" incremental contribution to any such cumulatively significant impacts.

In the case of a General Plan, cumulative effects occur when future development under the General Plan is combined with development in surrounding areas, or in some instances, within the entire region. Where the incremental effect of a project is not "cumulatively considerable," a lead agency need not consider that effect significant but must briefly describe its basis for concluding that the effect is not cumulatively considerable.

The cumulative impact discussions in Sections 3.1 through 3.16 explain the geographic scope of the area affected by each cumulative effect (e.g., immediate project vicinity, city, planning area, county, watershed, or air basin). The geographic area considered for each cumulative impact depends upon the impact that is being analyzed. For example, in assessing noise impacts, the geographic study area is more local and includes the immediate vicinity of the areas of new development under the General Plan Update. In assessing air quality impacts, all development within the air basin contributes to regional emissions of criteria pollutants and basin-wide projections of emissions is the best tool for determining cumulative effect.

Section 15130 of the CEQA Guidelines permits two different methodologies for completion of the cumulative impact analysis.

- The "list" approach permits the use of a list of past, present, and probable future projects producing related or cumulative impacts, including projects both within and outside the city; and
- The "projections" approach allows the use of a summary of projections contained in an adopted plan or related planning document, such as a regional transportation plan, or in an EIR prepared for such a plan. The projections may be supplemented with additional information such as regional modeling.

This Draft Program EIR uses the projections approach and takes into account growth from the General Plan Update within the South San Francisco Planning Area, in combination with impacts from projected growth in the rest of San Mateo County and the surrounding region, as forecast by the Association of Bay Area of Governments (ABAG).

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3.1 - Aesthetics, Light, and Glare

3.1.1 - Introduction

This section of the Draft Program Environmental Impact Report (Draft Program EIR) addresses potential environmental effects related to aesthetics, light, and glare within the South San Francisco General Plan Update Planning Area (Planning Area) resulting from implementation of the General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project). Future discretionary projects facilitated by the proposed project will be evaluated for project-specific impacts related to aesthetics, light, and glare at the time they are proposed.

The following is a summary of comments related to Aesthetics, Light, and Glare received in response to the Notice of Preparation (NOP). The comment letters are included in Appendix A.

- Recommends that the proposed project avoid or minimize the use of artificial lighting to reduce nighttime light pollution.

The descriptions and analysis in this section are based, in part, on statements, data, and figures provided by the following reference materials:

- South San Francisco General Plan Update
- South San Francisco Municipal Code
- California Department of Transportation List of Eligible and Officially Designated State Scenic Highways

3.1.2 - Environmental Setting

Visual Character

South San Francisco occupies the basin and portions of the sides of a broad valley formed by the San Bruno Mountain on the north and the Coast Range on the west. Most of the valley faces adjacent San Francisco Bay, affording sweeping vistas from higher levels and a definite sense of identification with the Bay.[1]

Visual character in the California Environmental Quality Act (CEQA) context is an impartial description of the defining physical features, landscape patterns, and distinctive physical qualities within a landscape. Visual character is informed by the composition of land, vegetation, water, and structure and their relationship (or dominance) to one another, and by prominent elements of form, line, color, and texture that combine to define the composition of views. Visual character-defining resources and features within a landscape may derive from notable landforms, vegetation, land uses, building design and façade treatments, transportation facilities, overhead utility structures and lighting, historic structures or districts, or panoramic open space.

[1] City of South San Francisco. About South San Francisco. Website: https://www.ssf.net/our-city/about-south-san-francisco. Accessed April 24, 2022.

Community design is impacted by the character and age of buildings, as well as their interaction with the surrounding environment. Building design and character in South San Francisco varies greatly by neighborhood. For instance, Downtown features two retail corridors, Grand Avenue and Linden Avenue, where a variety of historic structures and land uses contribute to the creation of memorable corridors with diverse architectural styles. East of US-101, on the other hand, building character is significantly different, as there is a high concentration of large office and Research and Development (R&D) buildings built after 2000 that are set further back from the street.

Key components of quality building design include using sustainable, long-lasting building materials, orienting buildings toward streets to create inviting spaces, and designing buildings to reflect local history. The General Plan Update seeks to facilitate building design that creates walkable and inviting spaces, such as locating parking behind buildings, allowing for outdoor plazas and dining, and locating building frontages in close proximity to the sidewalk edge, where appropriate.

Scenic Resources

Scenic resources typically involve prominent, unique, and identifiable natural features in the environment (e.g., trees, rock outcroppings, islands, ridgelines, channels of water, and aesthetically appealing open space) and cultural features or resources (e.g., regional or architecturally distinctive buildings, or structures that serve as a focal point of interest).

The General Plan Update identifies the San Francisco Bay, San Bruno Mountain, and Colma Creek as important natural features. These natural features act as landmarks establishing a strong sense of place and location within the community and provide significant opportunities to support urban ecology and biological resources. The General Plan Update and Climate Action Plan promote the restoration of Colma Creek, which would improve the visual character of the City and provide connectivity to the San Francisco Bay and the Bay Trail. San Bruno Mountain State Park is located just north of the City and provides sweeping views of the San Francisco Bay. The City is also home to a number of heritage trees that are protected by the City's tree ordinance (Chapter 13.30 of the Municipal Code) that contribute to the scenic quality of the City. Other scenic resources in the City include Historic Resources, such as the Grand Avenue Commercial Historic District and two National Register of Historic Places (NRHP)-listed properties: the Martin Building, located at 265 Grand Avenue (also known as the Metropolitan Hotel), and the South San Francisco Hillside Sign.

Scenic Vistas and Views

A scenic vista or scenic view is generally described as a view of an area that is visually or aesthetically pleasing. Examples of distinctive scenic vistas and views include urban skylines, valleys, mountain ranges, and large bodies of water. The General Plan Update (Policy LU-8.8) calls for the protection of unique public views of the City, the San Francisco Bay, and local landmarks from major thoroughfares and hillside open spaces. As such, the City strives to protect views of the South San Francisco Hillside Sign, which is a prominent visual feature and is listed on the NRHP. In addition, the City strives to protect views of the hillside open spaces, including Sign Hill, San Bruno Mountain, and the Coast Range (west of the Planning Area).

Scenic Highways

There are no officially designated State Scenic Highways that traverse the Planning Area.[2] Interstate 280 (I-280), from its intersection with Mission Bay Drive in the City of San Francisco to the South San Francisco and San Bruno border is eligible for designation as a State Scenic Highway; the portion that traverses the Planning Area is shown on Exhibit 3.1-1. Views from the portion of I-280 that is eligible for designation as a State Scenic Highway include trees, local roadways, and houses in the foreground and views of the City, San Bruno Mountain, and the San Francisco Bay in the distance. An eligible State highway can become officially designated through a process in which the local governing body applies to Caltrans for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a State Scenic Highway by the Caltrans Director.

I-280 is an officially designated State Scenic Highway from the South San Francisco and San Bruno border until it reaches Stanford University in Palo Alto and does not traverse the Planning Area. Distant views of the City of South San Francisco and San Bruno Mountain are intermittently visible from the officially designated portion of I-280; however, most of the views of the City and San Bruno Mountain are shielded by existing trees (see Exhibit 3.1-1).

The portion of State Route (SR) 35 (Junipero Serra Freeway) that borders the western side of the Planning Area is eligible for designation as a State Scenic Highway. Distant views of the City of South San Francisco and San Bruno Mountain are intermittently visible from SR-35; however, most of the views of the City and San Bruno Mountain are shielded by existing trees (see Exhibit 3.1-1).

The South San Francisco General Plan Update and the South San Francisco Municipal Code and Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, do not contain regulations governing scenic highways in the Planning Area. However, the Municipal Code, Zoning Ordinance, and General Plan Update do contain regulations governing visual character, such as development standards within various neighborhoods, parks, and open spaces (See Section 3.1.3–Regulatory Framework).

Light and Glare

Light pollution refers to the inappropriate or excessive use of artificial light. Components of light pollution include glare (excessive brightness that causes visual discomfort), light trespass (light falling where it is not intended or needed), sky glow (brightening of the night sky over inhabited areas), and clutter (bright, confusing and excessive groupings of light sources).[3] Light pollution impairs views of the night sky and can be disruptive to humans and nocturnal animal species.

During the day, sunlight reflecting from structures is a primary source of glare, while nighttime light and glare can be stationary or from mobile sources. Stationary sources of nighttime light include structure illumination, interior lighting, decorative landscape lighting, and streetlights. The principal mobile source of nighttime light and glare is vehicle headlamp illumination.

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[2] California Department of Transportation (Caltrans). 2019. List of eligible and officially designated State Scenic Highways. August.
[3] International Dark-Sky Association. 2022. Light Pollution. Website: https://www.darksky.org/light-pollution/. Accessed April 20, 2022.

3.1.3 - Regulatory Framework

Federal

No federal plans, policies, regulations, or laws related to aesthetics are applicable to the proposed project.

State

California Scenic Highway Program

The State Legislature created the California Scenic Highway Program, maintained by the California Department of Transportation (Caltrans), in 1963. The purpose of the State Scenic Highway Program is to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment. The State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been officially designated. The status of a proposed State Scenic Highway changes from eligible to officially designated when the local governing body applies to Caltrans for State Scenic Highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a State Scenic Highway.

Title 24 of the California Code of Regulations Building Energy Efficiency Standards

California Building Code (California Code of Regulations [CCR], Title 24)–including Title 24, Part 6–includes Section 132 of the Building Energy Efficiency Standards, which regulates lighting characteristics, such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off. Different lighting standards are set by classifying areas by lighting zone. The classification is based on population figures of the 2000 Census. Areas can be designated as LZ1 (dark), LZ2 (rural), or LZ3 (urban). Lighting requirements for dark and rural areas are stricter in order to protect the areas from new sources of light pollution and light trespass.

Local

South San Francisco General Plan Update

The General Plan Update includes the following relevant policies and actions that assist in reducing or avoiding impacts related to aesthetics, light, and glare:

Land Use and Community Design Element

Policy LU-2.2 Architectural transitions near transit centers. Require development projects near transit centers to use architectural transitions, such as setbacks, transitions in building height, and landscaping, when adjacent to lower-density residential properties.

Policy LU-2.3 Develop connected transit-oriented communities. Develop strong pedestrian, shuttle, and bicycle connections to and/from transit via pedestrian-oriented

building design, creating safe and convenient road crossings, and providing street furniture and amenities.

Action LU-2.3.3 Incorporate gateway elements near transit centers. Incorporate local art, gateway signage, and landscaping near major transit centers to welcome people to South San Francisco and imbue these areas with local identity.

Policy LU-4.1 Implement objective design standards. Adopt and implement objective design standards to manage new low-density development.

Policy LU-4.5 Neighborhood compatibility. Require new development to be compatible and well-integrated with existing residential neighborhoods.

Policy LU-4.6 Develop neighborhood design guidelines. As appropriate, develop design guidelines for residential neighborhoods in South San Francisco to promote high-quality design.

Policy LU-5.2 Maintain high-quality design and development standards. Maintain high-quality design and development standards for R&D companies that support a mix of larger, higher-intensity campuses.

Policy LU-8.4 Require street trees. Require new development to add street trees along streets and public spaces that provide shade, attractive landscaping, and contribute positively toward public health outcomes and climate mitigation and adaptation.

Policy LU-8.7 Improve the Colma Creek public realm. Improve the public realm along Colma Creek to beautify the city and enhance the creek as a recreational amenity.

Policy LU-8.8 Maintain and protect public views. Maintain and protect unique public views of the city, the bay, and local landmarks from major thoroughfares and hillside open spaces.

Policy LU-9.1 Create new and update existing design guidelines and development standards. Create new and update existing design guidelines and development standards, including form-based codes, aspirational design standards, and design guidelines.

Action LU-9.1.1 Aspirational design standards. Consider creating aspirational design standards, rather than minimum standards, that lead to more successful developments.

Action LU-9.1.2 Form-based codes. Develop form-based codes for the new mixed use and high-density residential areas proposed in the Lindenville, East of 101 and El Camino Real sub-areas.

Action LU-9.1.3 Create location-specific design guidelines. Create location-specific design guidelines that help to reinforce the character of a neighborhood, such as the industrial history of Lindenville.

Action LU-9.1.4 Periodic review of development procedures. Review the city's design guidelines, development standards and development review procedures on a periodic basis to allow for new and innovative design techniques and evolving technologies.

Policy LU-9.2 Encourage architectural and visual interest in new development. Encourage distinctive architecture and elements that add visual interest to buildings to enhance people's perceptions of South San Francisco as an interesting and inviting place.

Action LU-9.3.1 Create building materials list. Establish a list of preferred and discouraged building materials for different building, walls, and fence types. Consider developing distinctive standards for different zoning classifications, emphasizing durability, aesthetics, and visual continuity in materials and design.

Sub-Areas Element

Policy SA-2.1 Strengthen Downtown identity. Strengthen Downtown's identity as a center for arts and culture in South San Francisco.

Action SA-2.1.4 Develop Downtown Gateways. Develop design elements and gateways that celebrate Downtown's unique arts and cultural identity.

Policy SA-5.3 Enhance Downtown streetscapes. Improve the streetscape along Grand Avenue and Linden Avenue by incorporating outdoor seating, lighting, street trees, and other street furniture through the adoption of design guidelines.

Policy SA-6.1 Develop new buildings to be compatible with Downtown building scale and character. Ensure new buildings are developed at a scale and in a character compatible with Downtown's existing historical and physical context.

Policy SA-7.3 Require context-sensitive design. Require context-sensitive design for new buildings along Airport Boulevard, including height transitions, rear setbacks, and use of visual buffers (e.g., landscaping, fencing) to provide appropriate transitions between new buildings and existing residential uses.

Policy SA-7.5 Improve Airport Boulevard streetscape. Improve the streetscape along Airport Boulevard by incorporating seating, lighting, street trees, and other street furniture through the adoption of design guidelines.

Policy SA-13.2 Implement El Camino Real streetscape enhancements. Transform El Camino Real into a boulevard with streetscape enhancements, including street furniture, signage, consistent landscaping on medians, and public art that enhance the appearance of the corridor.

Policy SA-13.4 Require context-sensitive design. Require development projects along El Camino Real to use architectural transitions, such as setbacks, transitions in building height, and landscaping, to adjacent residential properties.

Policy SA-23.3 Improve the South Spruce Avenue streetscape. Improve the streetscape along South Spruce Avenue by incorporating seating, lighting, street trees, and other street furniture through the adoption of design guidelines.

Policy SA-24.3 Promote high-quality building design. Promote high-quality building design along Colma Creek.

Policy SA-30.1 Require context-sensitive design. Require context-sensitive design for new buildings along El Camino Real and South Spruce Avenue, including height transitions, rear setbacks, and use of visual buffers (e.g., landscaping, fencing) to provide appropriate transitions between new buildings and existing residential uses.

Policy SA-32.5 Create buffering from US-101. Create landscaping buffers and other buffers to reduce noise, visual, and air quality impacts from US-101.

Policy SA-35.2 Identify streetscape improvement opportunities. Identify streetscape improvement opportunities between Sunshine Gardens and regional hubs including BART and Kaiser medical campus.

Policy SA-37.1 Create Gateway signage in Westborough. Enhance gateway signage along Junipero Serra Boulevard into South San Francisco.

Parks and Recreation Element

Policy PR-3.2 Minimize environmental impact of support facilities. Limit the construction of facilities in open space areas and design necessary improvements, such as fire roads, access roads, and parking facilities, to minimize environmental impacts and maintain the visual qualities of the open space.

Community Resilience Element

Policy CR-4.3 Discourage hillside area development on slopes more than 30 percent. Discourage development on steep hillside areas more than 30 percent grade. Development of hillside sites should follow existing contours to the greatest extent possible. Grading should be kept to a minimum.

Environmental and Cultural Stewardship Element

Policy ES-2.2 Maintain development standards adjacent to the San Francisco Bay to support habitat. Maintain standards and guidelines for new construction within 150 feet of San Francisco Bay that support the health of the Bay. This policy includes:

- Requiring no net new impervious areas.
- Maintaining (or increasing) building setbacks to support habitat areas and adaptation.
- Requiring new construction to construct bioswales or similar features to treat runoff before it enters the Bay.

- Requiring low-intensity lighting to reduce the amount of light reaching sensitive habitat.
- Using a planting palette consisting of native species and species that provide valuable resources for native wildlife.
- Requiring an assessment as part of the California Environmental Quality Act (CEQA) process to consider wildlife impacts before project approval to continue to protect special-status of species.

City of South San Francisco Climate Action Plan

The Climate Action Plan includes the following actions that assist in reducing or avoiding impacts related to aesthetics:

Action CS 2.1 Public Tree Planting. Expand the canopy cover to reach the goals of the Urban Forest Master Plan and increase environmental benefits, prioritizing disadvantaged communities and connected wildlife corridors.

Action CS 3.1 Colma Creek Restoration. Enhance Colma Creek as an ecological corridor, restoring 5 miles of creek ecologies and creating transitional habitat zones to build resilience and ecosystem services. Protect and expand existing marsh and wetland habitat to improve water quality, adapt to climate change, and provide habitat for wildlife.

City of South San Francisco Municipal Code

Chapter 13.28 Street Tree Ordinance of the City of South San Francisco

Section 13.28.110 (Construction areas) requires a tree removal permit for any construction activities on or adjacent to public property that requires removal of a tree planted on the property. As a condition of permit issuance, the applicant shall be required to replace the tree with one of the same size and species in a location designated by the director. In addition, under Section 13.28.110, no person shall excavate any ditches, tunnels or trenches or install pavement within a radius of four feet from any street tree without written permission of the director. A person performing any work of excavation or construction on any street or publicly owned property shall guard and protect the tree so as to prevent injury thereof.

Chapter 13.30 Tree Preservation.

Chapter 13.30 of the Municipal Code discusses preservation of the City's trees to preserve the scenic beauty of the City, maintain ecological balance, prevent erosion of topsoil, counteract air pollution, oxygenate the air, absorb noise, maintain climatic and microclimatic balance, help block wind, and provide shade and color. This chapter also provides standards and requirements for the protection of certain large trees and trees with unique characteristics; provides standards and requirements for planting and maintenance of trees for new development; and establishes recommended standards for planting and maintaining trees on property that is already developed.

City of South San Francisco Zoning Ordinance

The South San Francisco Zoning Ordinance contains architectural guidelines, design review criteria, lot and development standards, landscaping requirements, and other regulations for various land uses in order to promote aesthetic quality within the City. In particular, the following chapters of the South San Francisco Zoning Ordinance, including the new or revised chapters of the Zoning Ordinance that are part of the proposed project, assist in reducing or avoiding impacts related to aesthetics, light, and glare.

Allowable land uses and development standards are defined for each Base Zoning District, Overlay District, and Specific and Area Plan Districts to preserve, protect, and enhance the character of the City's different neighborhoods and the quality of life of City residents. Some of the development standards include building heights, building setbacks, and landscaping requirements. The Zoning Districts are listed below:

- Chapter 20.060, Establishment of Conventional Zoning Districts (revised)
- Chapter 20.070, Residential Zoning Districts (revised)
- Chapter 20.080, Downtown Residential Zoning Districts (revised)
- Chapter 20.090, Downtown /Caltrain Station Area Zoning Districts (revised)
- Chapter 20.100, Non-Residential Districts (revised)
- Chapter 20.110, Civic Districts (revised)
- Chapter 20.120, Public and Semi-Public Zoning Districts (existing)
- Chapter 20.135, Form-Based Zoning Districts (new)
- Chapter 20.140, Planned Development District (existing)
- Chapter 20.170, Special Environmental Studies Overlay District (existing)
- Chapter 20.180, Flood Plain/Sea Level Rise Overlay (new)
- Chapter 20.230, Oyster Point Specific Plan District (revised)
- Chapter 20.260, Genentech Master Plan District (revised)
- Chapter 20.270, El Camino Real/Chestnut Avenue Area Plan District (existing)

Chapter 20.300 Lot and Development Standards (revised)

The purpose of this chapter is to prescribe development and site standards that apply, except where specifically stated, to development in all districts. These standards shall be used in conjunction with the standards for each zoning district located in Division II, Base and Overlay District Regulations or Division III, Form-Based Zoning Districts.

Section 20.300.007 (Landscaping) (revised) includes landscaping standards to improve the appearance of the community by requiring aesthetically pleasing landscaping on public and private sites and soften the appearance of parking lots and other development through landscaping.

Section 20.300.008 (Lighting and Illumination) (revised) establishes regulations that allow outdoor lighting for uses and activities consistent with the need for utility, safety, and nighttime attractiveness while minimizing:

1. Light escaping directly from fixtures or indirectly after reflection from surfaces into the atmosphere which causes increased artificial sky brightness;

2. Glare arising directly from fixtures or from over-illuminated outdoor areas which interferes with effective vision;
3. Energy waste which increases impacts on the environment through energy production byproducts;
4. Light trespass across property lines; and
5. Potential disruption to nocturnal ecosystems including human health.

Section 20.300.014 (Underground Utilities) (revised) requires that all exterior utilities, including but not limited to drainage systems, sewers, natural gas lines, water, electrical, telephone, cable television, and similar distribution lines providing direct service to a development site shall be installed and maintained underground within a project site. Further, all on-site underground utilities shall be designed and installed to minimize the disruption of off-site utilities, paving and landscaping during construction and maintenance.

Chapter 20.310 Site and Building Design Standards (new)

The purpose of this chapter is to prescribe general citywide site and building design standards. The standards of this chapter shall be used in conjunction with the standards for the applicable zoning district located in Division II, Base and Overlay District Regulations or Division III, Form-Based Zoning Districts.

Chapter 20.360 Signs (revised)

Section 20.360.004 (General Standards for All Signs) (revised) establishes standards for signs, including location standards, display standards, prohibited sign types, sign illumination, sign structure, and sign maintenance.

Chapter 20.480 Design Review (existing)

This chapter establishes the procedure for design review. The purpose of the provisions is to provide a review procedure to ensure that development is designed to support General Plan policies to preserve the scale and character of established neighborhoods and improve the community orientation of new development. Design review is intended to promote high-quality design, well-crafted and maintained buildings and landscaping, the use of high-quality building materials, and attention to the design and execution of building details and amenities in both public and private projects.

Section 20.480.006 (Design Review Criteria) (existing) identifies the criteria by which the Design Review Board, Chief Planning, Planning Commission, or City Council shall evaluate applications to ensure that they conform to the policies of the General Plan and any applicable specific plan, and are consistent with any other policies or guidelines the City Council may adopt for this purpose. The criteria include, but are not limited to:

- The site subject to design review shall be graded and developed with due regard for the natural terrain, aesthetic quality, and landscaping so as not to impair the environmental quality in the area.

- A building, structure, or sign shall not be of such poor quality of design as to adversely affect the environmental quality of the immediate areas or neighboring areas.
- New additions to existing residential dwellings shall be architecturally compatible with the primary residential unit, with respect to style, massing, roof pitch, color, and materials.
- A site shall be developed to achieve a harmonious relationship with the area in which it is located and adjacent areas.
- Open space, pedestrian walks, signs, illumination, and landscaping (including irrigation) shall be designed and developed to enhance the environmental quality of the site.
- Electrical and mechanical equipment or works and fixtures and trash storage areas shall be designed and constructed so as not to detract from the environmental quality of the site.

Genentech Master Plan

The Genentech Master Plan was adopted in November 2020 and focuses on the approximately 207-acre property that comprises the Genentech Campus in eastern South San Francisco adjacent to the San Francisco Bay. The Master Plan envisions new growth and intensification of development and infill, promotes alternative modes of transportation, and ensures consistency and reliability with the City's regulatory land use tools.

Oyster Point Specific Plan

The Oyster Point Specific Plan was adopted in February 2011. The intent of the Specific Plan is to transform 81 acres of underutilized, underdeveloped, and environmentally challenging Bay-front land in South San Francisco into a sustainable mixed-use development that will include a state-of-the-art life science campus, a park and recreation destination, a vibrant marina environment, and a site that can accommodate commercial and hotel land uses.

3.1.4 - Methodology

Impacts related to aesthetics resulting from implementation of the proposed project (collectively, the General Plan Update, Zoning Code Amendments, and Climate Action Plan) are discussed below. The impact analysis is based on the existing visual character of the Planning Area, including scenic vistas, highways, roadways, and existing sources of light and glare. Changes to aesthetic resources that may occur from implementation of the proposed project are identified and qualitatively evaluated based on potential modifications to the existing aesthetic setting. Impacts related to aesthetics are assessed using significance criteria established by the CEQA guidelines.

3.1.5 - Thresholds of Significance

According to the CEQA Guidelines Appendix G Environmental Checklist, to determine whether impacts to aesthetics are significant environmental effects, the following questions are analyzed and evaluated:

Except as provided in Public Resources Code Section 21099, would the project:

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

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway?

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

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

3.1.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where appropriate.

Scenic Vistas

Impact AES-1: The proposed project would not have a substantial adverse effect on a scenic vista.

A scenic vista or scenic view is generally described as a view of an area that is visually or aesthetically pleasing. Examples of distinctive scenic vistas and views include urban skylines, valleys, mountain ranges, and large bodies of water. Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area which could alter existing scenic vistas and views. Because South San Francisco is a fully built city, new development would primarily occur on parcels that already contain some existing homes or businesses, with the majority of potential growth occurring within the East of 101, Lindenville, Downtown, and El Camino planning sub-areas (Chapter 2, Project Description, Exhibit 2-5). Additionally, the proposed project may result in other private and public improvements throughout the City with the potential for environmental effects related to scenic vistas and views (see Sections 2.5.2, 2.5.5, and 2.5.6, Chapter 2, Project Description).

The General Plan Update (Policy LU-8.8) calls for the protection of unique public views of the City, the San Francisco Bay, and local landmarks from major thoroughfares and hillside open spaces. As such, the City strives to protect views of the South San Francisco Hillside Sign, which is a prominent visual feature and is listed on the NRHP. In addition, the City strives to protect views of the San Francisco Bay and hillside open spaces, including Sign Hill, San Bruno Mountain, and the Coast Range (west of the Planning Area).

Development under the proposed project could alter existing views, including views of the South San Francisco Hillside Sign, Sign Hill, San Bruno Mountain, the Coast Range, and the San Francisco Bay. The proposed project promotes restoration of Colma Creek through General Plan Update Policy LU-8.7 and Action CS 3.1 of the Climate Action Plan, which would improve the visual character of the City. Views of these features could be affected by future development under the proposed project.

As discussed below, mandatory compliance with design review regulations and policies in the South San Francisco Municipal Code and Zoning Ordinance and General Plan Updates would ensure that potential impacts related to scenic vistas and views from new development under the proposed project would be less than significant.

The General Plan Update includes policies and actions intended to protect scenic vistas and views in and around the Planning Area. Policy LU-8.8 requires the City to maintain and protect unique public views of the City, the Bay, and local landmarks from major thoroughfares and hillside open spaces. Policy SA-32.5 requires the City to create landscaping buffers and other buffers to reduce visual impacts from US-101. Policy LU-9.2 requires the City to encourage distinctive architecture and elements that add visual interest to buildings to enhance people's perceptions of South San Francisco as an interesting and inviting place. Policy SA-6.1 requires that new buildings are developed at a scale and in a character compatible with Downtown's existing historical and physical context. Policy PR-3.2 requires the City to limit the construction of facilities in open space areas and design necessary improvements, such as fire roads, access roads, and parking facilities, to minimize environmental impacts and maintain the visual qualities of the open space. Policy CR-4.3 discourages development on steep hillside areas with more than 30 percent grade and requires that development of hillside sites follow existing contours to the greatest extent possible and that grading is kept to a minimum. Lastly, Action LU-9.1.4 requires the City to review the City's design guidelines, development standards, and development review procedures on a periodic basis to allow for new and innovative design techniques and evolving technologies, which can also facilitate preservation of public views within the City.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, contains architectural guidelines, design review criteria, lot and development standards, landscaping requirements, and other regulations for various land uses in order to promote aesthetic quality within the City and protect scenic vistas and views. In particular, Chapter 20.480 (Design Review) (existing) establishes the procedure for design review to ensure that development is designed to support General Plan Update policies to preserve the scale and character of established neighborhoods, thereby ensuring that scenic vistas are protected. Section 20.480.006 (Design Review Criteria) (existing) identifies the criteria by which the Design Review Board, Chief Planner, Planning Commission, or City Council shall evaluate applications to ensure that they conform to the policies of the General Plan Update and any applicable specific plan, and are consistent with any other policies or guidelines the City Council may adopt for this purpose. Allowable land uses and development standards are defined for each Base Zoning District, Overlay District, and Specific and Area Plan Districts to preserve, protect, and enhance the character of the City's different neighborhoods and the quality of life of City residents. Some of the development standards include building heights, building setbacks, and landscaping requirements, which assist in protecting scenic vistas and views throughout the City.

The South San Francisco Municipal Code does not contain specific regulations governing protected scenic vistas or scenic views in the Planning Area. However, the Municipal Code does contain regulations to enhance the visual character of the City, which can assist in protecting scenic vistas and views throughout the City. For example, Section 13.28.110 (Construction areas) requires a tree removal permit for any construction activities on or adjacent to public property that requires

removal of a tree planted on the property. Chapter 13.30 (Tree Preservation) requires the City, property owners, and/or project applicants to preserve, protect, and plant trees in order to preserve the scenic beauty of the City. This chapter also provides standards and requirements for the protection of certain large trees and trees with unique characteristics; provides standards and requirements for planting and maintenance of trees for new development; and establishes recommended standards for planting and maintaining trees on property that is already developed. The Climate Action Plan does not contain any actions related to protected views or scenic vistas.

As the City receives development applications, those applications will be reviewed under the design review procedures in Chapter 20.480 (Design Review) (existing) of the Zoning Ordinance, including Section 20.480.006 (Design Review Criteria), which specifically states that a site subject to design review shall be graded and developed with due regard for the natural terrain, aesthetic quality, and landscaping so as not to impair the environmental quality in the area. In addition, all future development would be required to comply with the policies and actions of the General Plan Update designed to protect view corridors, scenic resources, and natural features. At the programmatic level, aesthetic impacts to scenic vistas and scenic views would be reduced to a less than significant level. Consistent with the General Plan Update policies and actions, individual development projects would be required to undergo project-specific environmental review, which may require additional site-specific or project- specific measures to reduce any potential impacts and would ensure that impacts remain less than significant.

Level of Significance

Less than significant impact.

Scenic Highways

Impact AES-2:	**The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway.**

A significant impact would occur if future development under the proposed project would substantially damage scenic resources as seen from an officially designated State Scenic Highway. There are no officially designated State Scenic Highways that traverse the Planning Area (Exhibit 3.1-1). I-280, from its intersection with Mission Bay Drive in the City of San Francisco to the South San Francisco and San Bruno border, is eligible for designation as a State Scenic Highway; the portion that traverses the Planning Area is shown on Exhibit 3.1-1. Views from the portion of I-280 that is eligible for designation as a State Scenic Highway include trees, local roadways, and houses in the foreground and views of the City, San Bruno Mountain, and the San Francisco Bay in the distance. An eligible State highway can become officially designated through a process in which the local governing body applies to Caltrans for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a State Scenic Highway by the Caltrans Director. I-280 is an officially designated State Scenic Highway from the South San Francisco and San Bruno border until it reaches Stanford University in Palo Alto and does not traverse the Planning Area. Distant views of the City of South San Francisco and San Bruno Mountain are intermittently visible from the officially designated portion of I-280; however, most of

the views of the City and San Bruno Mountain are shielded by existing trees (see Exhibit 3.1-1). The portion of SR-35 (Junipero Serra Freeway) that borders the western side of the Planning Area is eligible for designation as a State Scenic Highway. Distant views of the City of South San Francisco and San Bruno Mountain are intermittently visible from SR-35; however, most of the views of the City and San Bruno Mountain are shielded by existing trees (see Exhibit 3.1-1). In summary, undeveloped grassland, shrubs, trees, and rock outcroppings can be seen in the immediate vicinity of I-280 and SR-35, and San Francisco Bay, San Bruno Mountain, and the Coast Range can be seen in the distance from I-280 and SR-35.

Because South San Francisco is a fully built city, new development would primarily occur on parcels that already contain some existing homes or businesses, with the majority of potential growth occurring within the East of 101, Lindenville, Downtown, and El Camino planning sub-areas, which are not located in the vicinity of I-280 and SR-35. Furthermore, as discussed under Impact AES-1, all development under the proposed project would be subject to development and design standards for each zoning district as well as any other sections of the South San Francisco Municipal Code and Zoning Ordinance that protect scenic resources, thereby minimizing potential impacts to existing views that can be seen from I-280 or SR-35. For example, future development would be required to comply with Chapter 13.30 (Tree Preservation), which requires the preservation and protection of trees in order to preserve the scenic beauty of the City and Section 13.28.110 (Construction areas), which requires a tree removal permit for any construction activities on or adjacent to public property that requires removal of a tree planted on the property. In addition, future development would be required to comply with the General Plan Update policies and actions that protect scenic resources. Policy PR-3.2 requires the City to limit the construction of facilities in open space areas and design necessary improvements, such as fire roads, access roads, and parking facilities, to minimize environmental impacts and maintain the visual qualities of the open space. Policy CR-4.3 discourages development on steep hillside areas with more than 30 percent grade and requires that development of hillside sites follow existing contours to the greatest extent possible and that grading is kept to a minimum.

As discussed in greater detail in Section 3.4, Cultural Resources and Tribal Cultural Resources, any projects impacting a designated historic resource require a Certificate of Alteration prior to issuance of a building permit and all proposed work is to be reviewed by the City for conformance with the Secretary of the Interior's Guidelines for Rehabilitation (Municipal Code Section 2.56.130). In addition, individual development projects which propose to alter a building or structure greater than 45 years of age at the time an application is deemed complete, would be required to undergo project-specific environmental review in compliance with CEQA Guidelines Section 15064.5, in order for the City to determine whether the building or structure may be a historic resource, and take appropriate action such as requiring additional site-specific or project-specific measures to reduce any potential impacts to historic resources.

While future development could occur in the vicinity of the I-280 and SR-35, those projects would be reviewed by the City to ensure that impacts related to scenic resources remain less than significant (see Impacts AES-1 and AES-3). Moreover, subsequent development, infrastructure, and planning projects would be subject to the General Plan Update policies and actions, as well as the South San Francisco Municipal Code and Zoning Ordinance, to reduce impacts related to scenic resources.

Thus, impacts related to scenic resources within a State Scenic Highway would be less than significant.

Level of Significance

Less than significant impact.

Visual Character

Impact AES-3: The proposed project is in an urbanized area and would not conflict with applicable zoning and other regulations governing scenic quality.

The City of South San Francisco is located in an urbanized area and development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area, with the majority of potential growth occurring within the East of 101, Lindenville, Downtown, and El Camino planning sub-areas (Chapter 2, Project Description, Exhibit 2-5). Additionally, the proposed project may result in other private and public improvements throughout the City with the potential for environmental effects related to scenic quality (see Sections 2.5.2, 2.5.5, and 2.5.6, Chapter 2, Project Description).

As discussed under Impacts AES-1 and AES-2, as the City receives development applications for subsequent development under the proposed project, those applications will be reviewed by the City for compliance with the policies and actions of the General Plan Update related to scenic quality in urbanized areas, including scenic views and scenic resources. In addition, the South San Francisco Municipal Code and Zoning Ordinance, which implements the City's General Plan, would be reviewed when development applications are received.

The General Plan Update includes policies and actions intended to reduce impacts to visual character in and around the Planning Area and promote cohesive and visually appealing development consistent with the character of the City. For example, Policy LU-2.2 requires development projects near transit centers to use architectural transitions, such as setbacks, transitions in building height, and landscaping when adjacent to lower-density residential properties. Additional policies facilitate implementation of objective design standards, require new development to be compatible and integrated with existing residential neighborhoods, and provide for maintenance of high-quality design and development standards (Policies LU-4.1, LU-4.5, LU-4.6, and LU-5.2). The Sub-Areas Element includes policies and actions to provide for similar compatibility and high-quality architectural design specific to the identified sub-areas. The Parks and Recreation Element includes Policy PR-3.2, which limits the construction of facilities in open space areas and requires the design of necessary improvements, such as fire roads, access roads, and parking facilities, to minimize environmental impacts and maintain the visual qualities of the open space. Each of these policies aims to enhance the visual character of the City.

The South San Francisco Municipal Code also contains rules and regulations related to visual character. Chapter 13.30 (Tree Preservation) requires the City, private property owner, and/or project applicants to preserve, protect, and plant trees in order to preserve the scenic beauty of the City. This chapter also provides standards and requirements for the protection of certain large trees and trees with unique characteristics; provides standards and requirements for planting and maintenance of trees for new development; and establishes recommended standards for planting

and maintaining trees on property that is already developed. Section 13.28.110 (Construction areas) requires a tree removal permit for any construction activities on or adjacent to public property that requires removal of a tree planted on the property. As a condition of permit issuance, the applicant shall be required to replace the tree with one of the same size and species in a location designated by the director.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, contains architectural guidelines, design review criteria, lot and development standards, landscaping requirements, and other regulations for various land uses in order to promote aesthetic quality within the City and protect scenic views. In particular, Chapter 20.480 (Design Review) (existing) establishes the procedure for design review to ensure that development is designed to support General Plan Update policies to preserve the scale and character of established neighborhoods, thereby ensuring that scenic vistas are protected. Section 20.480.006 (Design Review Criteria) (existing) identifies the criteria by which the Design Review Board, Chief Planner, Planning Commission, or City Council shall evaluate applications to ensure that they conform to the policies of the General Plan Update and any applicable specific plan, and are consistent with any other policies or guidelines the City Council may adopt for this purpose. Allowable land uses and development standards are defined for each Base Zoning District, Overlay District, and Specific and Area Plan Districts to preserve, protect, and enhance the character of the City's different neighborhoods and the quality of life of City residents. Some of the development standards include building heights, building setbacks, and landscaping requirements, which assist in protecting scenic vistas and views throughout the City.

The Climate Action Plan includes actions that would improve the visual character of the City. Implementation of Action CS 3.1 would enhance Colma Creek as an ecological corridor, creating transitional habitat zones to build resilience and ecosystem services that would improve the visual character of the City. Implementation of Action CS 2.1 would expand the canopy cover to reach the goals of the Urban Forest Master Plan, which would also improve the visual character of the City.

In conclusion, subsequent development under the proposed project could potentially result in other private and public improvements throughout the City with the potential for environmental effects related to scenic qualify in light of applicable zoning and other regulations governing scenic quality in urbanized areas. However, compliance with General Plan Update and Climate Action Plan policies and actions, and adherence to development and design standards in the South San Francisco Municipal Code and Zoning Ordinance related to scenic views and scenic resources, would ensure that impacts remain less than significant.

Level of Significance

Less than significant impact.

Light and Glare

Impact AES-4:	**The proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.**

Because South San Francisco is a fully built city, new development under the proposed project would primarily occur on parcels that already contain some existing homes or businesses that currently generate light and glare. The proposed project may result in other private and public improvements throughout the City with the potential for environmental effects related to light and glare (see Sections 2.5.2, 2.5.5, and 2.5.6, Chapter 2, Project Description). Nonetheless, subsequent development under the proposed project would create new sources of light and glare within the Planning Area, contributing to increased ambient nighttime lighting conditions. Specific sources of lighting would include exterior light fixtures, signage on businesses, interior lighting, and headlights from motor vehicles. Specific sources of glare would include reflective building and motor vehicle surfaces, including windows.

As discussed in Section 3.3, Biological Resources, the General Plan Update includes policies and actions requiring the use of low intensity lighting to reduce the amount of light reaching sensitive habitat, which would reduce light and glare impacts in and around the Planning Area. For example, Policy ES-2.2 requires the use of low intensity lighting for development within 150 feet of the San Francisco Bay.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, contains architectural guidelines, design review criteria, lot and development standards, landscaping requirements, and other regulations for various land uses in order to reduce light and glare impacts within the City. Section 20.300.008 (Lighting and Illumination) (revised) of the South San Francisco Zoning Ordinance establishes regulations that allow outdoor lighting for uses and activities consistent with the need for utility, safety, and nighttime attractiveness while minimizing light and glare impacts. Section 20.300.008 (C) (revised) establishes general standards for outdoor lighting, including maximum heights for lighting fixtures, locations and shielding for lighting fixtures, and submittal of photometric data from lighting manufacturers to the City by the project applicant to demonstrate that the lighting requirements have been satisfied. Section 20.300.008 (D) (revised) prohibits the use of certain types of outdoor lighting, including lighting that results in glare to motor vehicles on public right-of-way, outdoor floodlighting, search lights, flood lights, laser lights, or similar high intensity light, and any lighting device located on the exterior of a building or on the inside of a window which is visible beyond the property boundaries of the lot or parcel with intermittent fading, flashing, blinking, rotating, or strobe light illumination. Section 20.360.004 (General Standards for All Signs) (revised) of the South San Francisco Zoning Ordinance establishes standards for signs, including display standards and sign illumination, to minimize light and glare impacts. For example, signs that use flashing lights, fluorescent colors, laser lights, or motion picture projection are prohibited. In addition, externally illuminated signs must be illuminated only with steady, stationary, fully shielded light sources directed solely onto the sign from above without causing glare.

As the City receives development applications for subsequent development under the proposed project, those applications will be reviewed by the City of South San Francisco for compliance with the City's Municipal Code and Zoning Ordinance, which includes standards for exterior lighting, as well as a review of potential glare impacts in the design review process. For projects that require a design review permit, the Design Review Board will review exterior lighting to ensure that the lighting is appropriately designed and located to minimize visual impacts to adjacent properties and

the general public. Potential issues related to glare would be addressed, in accordance with Chapter 20.480 (Design Review Procedures) (existing), thereby reducing daytime glare and nighttime lighting impacts. Projects for which signs are proposed would be reviewed for compliance with Sections 20.300.008 (revised) and 20.360.004 (revised) of the Zoning Ordinance, which include standards for internal illumination, external illumination, parking lot lighting, illumination control, and illuminated signage.

Subsequent development, infrastructure, and planning projects would be subject to the General Plan Update policies and actions, as well as the South San Francisco Municipal Code and Zoning Ordinance, to reduce potential impacts related to daytime glare and nighttime lighting within the Planning Area. As such, impacts would remain less than significant.

Level of Significance

Less than significant impact.

3.1.7 - Cumulative Impacts

The geographic scope of the cumulative impact analysis for aesthetics is the South San Francisco Planning Area, as well as Colma, Daly City, San Bruno, and portions of unincorporated San Mateo County. This analysis evaluates whether the impacts of the proposed project, together with the impacts of cumulative development, would result in a cumulatively significant impact on aesthetics and visual quality. This analysis then considers whether the incremental contribution to cumulative impacts associated with the implementation of the proposed project would be significant. Both conditions must apply for a project's cumulative effects to rise to the level of significance.

Visual Character and Views

The Planning Area and surrounding cities are urbanized and primarily built out. Future development in the cumulative context would include predominantly infill residential, commercial, and industrial development consistent with the General Plans of each municipality. The geographic area contains many natural features such as hillsides and ridgelines, as well as sweeping views of the San Francisco Bay from many viewpoints. Future development would be subject to the design review processes of the individual jurisdiction, and the applicable land use plans contain policies and implementing actions to preserve visual character, land use compatibility, and views in those jurisdictions. As such, the proposed project and cumulative development would be consistent with the character of the surrounding area and would not obstruct current views. For these reasons, cumulative impacts related to aesthetics would be less than significant.

The proposed project and cumulative development would be subject to specific regulations and guidelines related to building heights, setbacks, undergrounding of utilities, landscaping, signage, and permitted land uses. These regulations would ensure that visual character and viewsheds are maintained and/or enhanced. Therefore, the proposed project's contribution would not be cumulatively considerable. As such, the proposed project, in conjunction with other planned and approved projects, would result in a less than significant cumulative impact with respect to visual character and views.

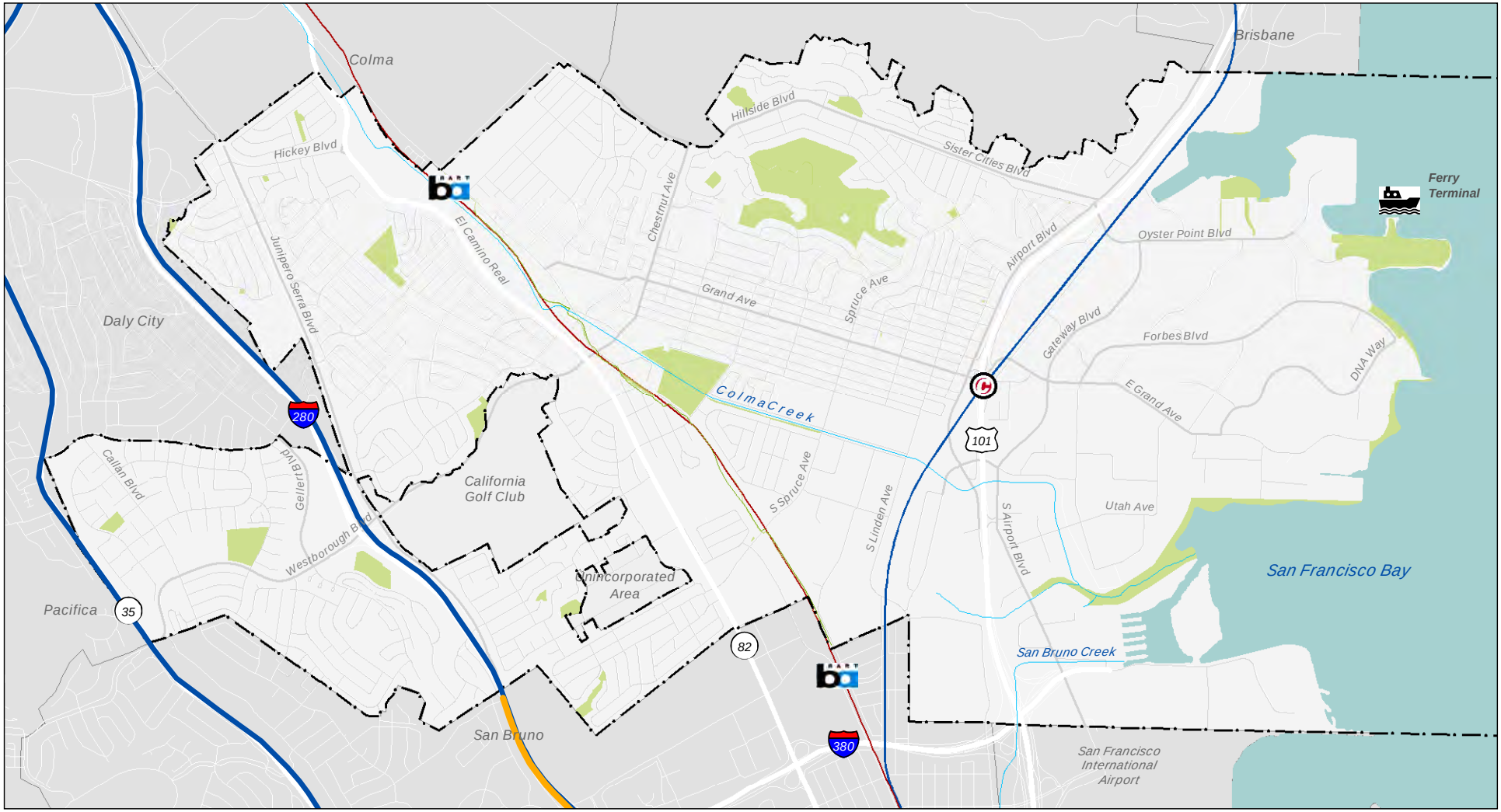
Light and Glare

The proposed project and cumulative development would consist primarily of infill development, which could increase light and glare in the geographic area. The proposed project and cumulative development would include streetlights, exterior lighting, safety lighting, lighting from vehicles, and sources of glare from the buildings and vehicles. Local regulations related to light and glare would be applicable to all cumulative development, similar to the proposed project; therefore, cumulative impacts would be less than significant.

Lighting and exterior building materials associated with the proposed project and cumulative development would be subject to administrative design review by the various jurisdictions. This process would ensure appropriate building materials are utilized, building windows are tinted with anti-reflective material, and exterior lighting is designed so that it is directed downward and away from adjacent properties. The proposed project and cumulative development would increase light and glare compared to existing conditions. However, adherence to the administrative design review process and standards of each applicable jurisdiction would minimize the light and glare impacts for the proposed project and cumulative development. Therefore, the proposed project's contribution would not be cumulatively considerable. As such, the proposed project, in conjunction with other planned and approved projects, would result in a less than significant cumulative impact with respect to light and glare.

Level of Cumulative Significance

Less than significant impact.



Source: Raimi + Associates, July 2019. Caltrans California State Scenic Highways.

Jurisdictional Boundary

- City of South San Francisco
- Other City Boundaries
- Sphere of Influence

Transportation Features

- BART
- Caltrain
- Highway
- Arterial
- Local Street

Scenic Highways

- State Eligible
- Officially Designated

FIRSTCARBON SOLUTIONS™

3,000 1,500 0 3,000 Feet

Exhibit 3.1-1
California State Scenic Highways

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3.2 - Air Quality

3.2.1 - Introduction

This section of the Draft Program Environmental Impact Report (Draft Program EIR) addresses potential physical environmental effects related to air quality within the South San Francisco General Plan Update Planning Area (Planning Area) from implementation of the General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project). Future discretionary projects facilitated by the proposed project will be evaluated for project-specific impacts related to air quality at the time they are proposed.

The following comments related to air quality were received in response to the Notice of Preparation (NOP). The comment letters are included in Appendix A.

- Recommends that the Draft Program EIR estimate and evaluate potential health risks to existing and future sensitive populations within the Planning Area from toxic air contaminants (TACs) and particulate matter, including dust, 2.5 micrometers or less in diameter ($PM_{2.5}$).
- Recommends that the Draft Program EIR evaluate the General Plan Update's consistency with the Bay Area Air Quality Management District's (BAAQMD) 2017 Clean Air Plan.
- States that aspects of the General Plan Update may require a permit from the BAAQMD.
- States that disparate air pollution impacts on communities of color in the City should be addressed.
- Suggests that residential and mixed-use land uses should be located near Bay Area Rapid Transit (BART) stations to improve air quality in the City by discouraging vehicle use.
- Expresses concern regarding health impacts of locating housing near U.S. Highway 101 (US-101).

The descriptions and analysis in this section are based, in part, on statements, data, and figures provided by the following reference materials:

- South San Francisco General Plan Update
- South San Francisco Municipal Code
- 2020 Air Monitoring Network Plan, BAAQMD, July 1, 2021
- 2017 Clean Air Plan, BAAQMD, April 2017
- California Air Resources Board, Area Designations Maps/State and National
- BAAQMD, Improving Air Quality and Health in Bay Area Communities, Community Air Risk Evaluation Program Retrospective and Path Forward, April 2014
- Air quality modeling results utilizing California Emissions Estimator Model (CalEEMod) Version 2020.4.0

3.2.2 - Environmental Setting

San Francisco Bay Area Air Basin

The City of South San Francisco (City) is located within the San Francisco Bay Area Air Basin (SFBAAB or Air Basin). The Air Basin encompasses approximately 5,600 square miles and includes all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa counties, and portions of southwestern Solano and southern Sonoma counties. The Air Basin is characterized by a large, shallow basin surrounded by coastal mountain ranges tapering into sheltered inland valleys. The combined climatic and topographic factors result in increased potential for the accumulation of air pollutants in the inland valleys and reduced potential for buildup of air pollutants along the coast. The Air Basin is bounded by the Pacific Ocean to the west and includes complex terrain consisting of coastal mountain ranges, inland valleys, and bays. The San Francisco Bay Area (Bay Area) has a Mediterranean climate characterized by mild, dry summers and mild, moderately wet winters, moderate daytime onshore breezes, and moderate humidity.

Ambient Air Quality Standards

National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based Ambient Air Quality Standards (AAQS) for seven air pollutants, which are shown in Table 3.2-1. These pollutants are ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the general public with a reasonable margin of safety.

Table 3.2-1: Federal and State Air Quality Standards for Criteria Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]
Ozone	1 hour	0.09 ppm	—
	8 hours	0.070 ppm	0.070 ppm[f]
Nitrogen dioxide[b] (NO_2)	1 hour	0.18 ppm	0.100 ppm
	Annual	0.030 ppm	0.053 ppm
Carbon monoxide (CO)	1 hour	20 ppm	35 ppm
	8 hour	9.0 ppm	9 ppm
Sulfur dioxide[c] (SO_2)	1 hour	0.25 ppm	0.075 ppm

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]
	3 hours	—	0.5 ppm
	24 hours	0.04 ppm	0.14 ppm (for certain areas)
	Annual	—	0.030 ppm (for certain areas)
Lead[e]	30-day	1.5 µg/m^3	—
	Quarter	—	1.5 µg/m^3
	Rolling 3-month average	—	0.15 µg/m^3
Particulate matter (PM_{10})	24 hours	50 µg/m^3	150 µg/m^3
	Mean	20 µg/m^3	—
Particulate matter ($PM_{2.5}$)	24 hours	—	35 µg/m^3
	Annual	12 µg/m^3	12.0 µg/m^3
Visibility-reducing particles	8 hours	See note below[d]	
Sulfates	24 hours	25 µg/m^3	—
Hydrogen sulfide	1 hours	0.03 ppm	—
Vinyl chloride[e]	24 hour	0.01 ppm	—

Notes:
µg/m^3 = micrograms per cubic meter
30-day = 30-day average
Annual = Annual Arithmetic Mean
ARB = California Air Resources Board
EPA = United States Environmental Protection Agency
PM_{10} = particulate matter, including dust, 10 micrometers or less in diameter
$PM_{2.5}$ = particulate matter, including dust, 2.5 micrometers or less in diameter
ppm = parts per million (concentration)
Quarter = Calendar quarter

[a] Federal standard refers to the primary National Ambient Air Quality Standard (NAAQS), or the levels of air quality necessary, with an adequate margin of safety to protect the public health. All standards listed are primary standards except for 3-hour SO_2, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[b] To attain the 1-hour nitrogen dioxide national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (0.100 ppm).

[c] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 part per billion (ppb). The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

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

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

[f] The EPA Administrator approved a revised 8-hour ozone standard of 0.07 ppb on October 1, 2015. The new standard went into effect 60 days after publication the Final Rule in the Federal Register. The Final Rule was published in the Federal Register on October 26, 2015 and became effective on December 28, 2015.

Source: California Air Resources Board (ARB). 2016. Ambient Air Quality Standards. May 4. Website: https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf Accessed April 19, 2022.

Attainment Status of the San Francisco Bay Area Air Basin

Areas that meet AAQS are classified attainment areas, and areas that do not meet these standards are classified nonattainment areas. Severity classifications for O_3 range from marginal, moderate, and serious to severe and extreme. The attainment status for the SFBAAB is shown in Table 3.2-2. The Air Basin is currently designated a nonattainment area for California and National O_3, California and National $PM_{2.5}$, and California PM_{10} AAQS.

Table 3.2-2: Attainment Status of Criteria Pollutants in the San Francisco Bay Area Air Basin

Pollutant	State Status	National Status
O_3	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	N/A
PM_{10}	Nonattainment	Unclassified
$PM_{2.5}$	Nonattainment	Nonattainment
Sulfates	Attainment	N/A
Hydrogen Sulfates	Unclassified	N/A
Visibility-reducing Particles	Unclassified	N/A
Lead	N/A	Attainment

Notes:
CO = carbon monoxide
N/A = information not available.
NO_2 = nitrogen dioxide
O_3 = ozone
PM_{10} = particulate matter, including dust, 10 micrometers or less in diameter
$PM_{2.5}$ = particulate matter, including dust, 2.5 micrometers or less in diameter
SO_2 = sulfur dioxide
Source: Bay Area Air Quality Management District (BAAQMD). 2017. Air Quality Standards and Attainment Status. January 5. Website: http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status. Accessed April 19, 2022.

City of South San Francisco

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features. Atmospheric conditions such as wind speed, wind direction, and air temperature inversions interact with the physical features of the landscape to determine the movement and dispersal of air pollutant emissions and, consequently, their effect on air quality. Summertime average daily temperatures are warm in the City. In the winter, average daily temperatures across the county range from mild to moderate.

In San Mateo County, ozone almost never exceeds health standards, and $PM_{2.5}$ exceeds the national standard only on about one day each year. San Mateo County frequently receives fresh marine air

from the Pacific Ocean, which passes over the coastal hills. In winter, $PM_{2.5}$ may be transported into San Mateo County from other parts of the Bay Area, adding to wood smoke, which may lead to elevated concentrations, but these are rarely high enough to exceed health standards.

The local air quality can be evaluated by reviewing relevant air pollution concentrations near the Planning Area. The air quality monitoring station closest to the Planning Area is the San Francisco-Arkansas Street monitoring station, approximately 7 miles north of the Planning Area. The next closet air monitoring station to the Planning Area is the Redwood City monitoring station, approximately 15 miles southeast of the Planning Area. Table 3.2-3 summarizes the recorded ambient air data at the representative monitoring stations for the years 2018 through 2020, which is the most current data available for this analysis. As shown in Table 3.2-3, the air quality in South San Francisco has no exceedances of nitrogen dioxide during the most recent 3 years of available data. However, ozone exceeded the State and National standards for one day in 2018. PM_{10} exceeded the State 50 micrograms per cubic meter (µg/m^3) 24-hour standard 24.6 days in 2017 and 23 days in 2020. In addition, $PM_{2.5}$ exceeded the national 150 µg/m^3 24-hour standard for 7.3 days in 2017, 14.6 days in 2018, and 8 days in 2020. It should be noted that most of these exceedances were due to wildfires that create large amounts of particulate matter.

Table 3.2-3: Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2018	2019	2020
Ozone(1)	1 Hour	Max 1 Hour (ppm)	0.065	0.091	0.088
		Days > State Standard (0.09 ppm)	0	0	0
	8 Hour	Max 8 Hours (ppm)	0.049	**0.073**	0.055
		Days > State Standard (0.07 ppm)	0	**1**	0
		Days > National Standard (0.070 ppm)(2)	0	**1**	0
CO	8 Hour	Max 8 Hours (ppm)	ND	ND	ND
		Days > State Standard (9.0 ppm)	ND	ND	ND
		Days > National Standard (9 ppm)	ND	ND	ND
NO_2(1)	Annual	Annual Average (ppm)	11	9	8
	1 Hour	Max 1 Hour (ppm)	0.069	0.061	0.047
		Days > State Standard (0.18 ppm)	0	0	0
SO_2	Annual	Annual Average (ppm)	ND	ND	ND
	24 Hour	Max 24 Hours (ppm)	ND	ND	ND
		Days > State Standard (0.04 ppm)	ND	ND	ND
Inhalable coarse particles (PM_{10})(1)	Annual	Annual Average (µg/m^3)	ND	14.8	**23.3**
	24 Hour	Max 24 Hours (µg/m^3)	43.0	42.0	**105.0**
		Days > State Standard (50 µg/m^3)	ND	0.0	**23.0**
		Days > National Standard (150 µg/m^3)	0.0	0.0	0.0

Air Pollutant	Averaging Time	Item	2018	2019	2020
Fine particulate matter ($PM_{2.5}$)(1)	Annual	Annual Average (µg/m^3)	11.7	7.7	10.5
	24 Hour	24 Hours (µg/m^3)	**44**	**44**	46
		Days > National Standard (35 µg/m^3)	**14.6**	0.0	**8.0**

Notes:
> = exceed
µg/m^3 = micrograms per cubic meter
Bold = exceedance
CO = carbon monoxide
EPA = United States Environmental Protection Agency
ID = insufficient data
max = maximum
National Standard = National Ambient Air Quality Standard (NAAQS)
ND = no data
NO_2 = nitrogen dioxide
PM_{10} = particulate matter, including dust, 10 micrometers or less in diameter
$PM_{2.5}$ = particulate matter, including dust, 2.5 micrometers or less in diameter
ppm = parts per million
SO_2 = sulfur dioxide
State Standard = California Ambient Air Quality Standard (CAAQS)
(1) San Francisco-Arkansas Street
(2) On October 1, 2015, the EPA strengthened the NAAQS for ground-level ozone to 70 parts per million through the adoption of a new standard. The Final Rule went into effect on December 28, 2015.
Source: California Air Resources Board (ARB). 2018. iADAM: Top 4 Summary. Website: https://www.arb.ca.gov/adam/topfour/topfour1.php. Accessed April 19, 2022.

3.2.3 - Air Pollutants of Concern

A substance in the air that can cause harm to humans and the environment is known as an air pollutant. Pollutants can be in the form of solid particles, liquid droplets, or gases.[1] In addition, they may be natural or man-made. A hazardous air pollutant is one that is known to cause cancer and other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects.[2]

Criteria Air Pollutants

CO, reactive organic gases (ROG), nitrogen oxides (NO_X), SO_2, PM_{10}, $PM_{2.5}$, and Pb are primary air pollutants and are "criteria air pollutants."[3] Criteria Air Pollutants have nationwide AAQS that have been established for them. ROG and NO_X are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and nitrogen dioxide (NO_2) are the principal secondary pollutants.

A description of each of the primary and secondary criteria air pollutants and their known health effects is presented below.

[1] Bay Area Air Quality Management District (BAAQMD). 2017. CEQA Air Quality Guidelines, Appendix C, May.
[2] United States Environmental Protection Agency (EPA). Hazardous Air Pollutants. Website: https://www.epa.gov/haps. Accessed April 19, 2022.
[3] Bay Area Air Quality Management District (BAAQMD). 2017. CEQA Air Quality Guidelines, Appendix C. May.

Carbon Monoxide (CO) is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as wood, coal, gasoline, and diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little or no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, motor vehicles operating at slow speeds are the primary source of CO in the SFBAAB. Emissions are highest during cold starts, hard acceleration, stop-and-go driving, and when a vehicle is moving at low speeds. New findings indicate that CO emissions per mile are lowest at about 45 miles per hour (mph) for the average light-duty motor vehicle and begin to increase again at higher speeds. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces its oxygen-carrying capacity. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia, as well as for fetuses. Even healthy people exposed to high CO concentrations can experience headaches, dizziness, fatigue, unconsciousness, and even death. The Air Basin is designated under the California and National AAQS as being in attainment of CO criteria levels.

Reactive Organic Gases (ROGs) are compounds composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of ROGs. Other sources of ROGs include evaporative emissions from paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROGs, but rather by reactions of ROGs to form secondary pollutants such as O_3. There are no AAQS established for ROGs. However, because they contribute to the formation of O_3, the BAAQMD has established a significance threshold for this pollutant.

Nitrogen Oxides also known as Oxides of Nitrogen (NO_X) are a by-product of fuel combustion and contribute to the formation of O_3. The two major components of NO_X are nitric oxide (NO) and nitrogen dioxide (NO_2). The principal component of NO_X produced by combustion is NO, but NO reacts with oxygen to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 acts as an acute irritant and in equal concentrations is more injurious than NO. At atmospheric concentrations, however, NO_2 is only potentially irritating. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 ppm. NO_2 absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The SFBAAB is designated an attainment area for NO_2 under the National AAQS and California AAQS.

Sulfur Dioxide (SO_2) is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO_2. When SO_2 forms sulfates (SO_4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_x). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. Even at lower concentrations and when combined with particulates, SO_2 may

do harm by injuring lung tissue. The SFBAAB is designated an attainment area for SO_2 under the California and National AAQS.

Suspended Particulate Matter (PM_{10} and $PM_{2.5}$) consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM_{10}, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004-inch) or less. Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns or less (i.e., 2.5 millionths of a meter or 0.0001 inch).

Some particulate matter, such as pollen, occurs naturally. In the Air Basin most particulate matter is caused by combustion, factories, construction, grading, demolition, agricultural activities, and motor vehicles. Extended exposure to particulate matter can increase the risk of chronic respiratory disease. PM_{10} bypasses the body's natural filtration system more easily than larger particles and can lodge deep in the lungs. The United States Environmental Protection Agency (EPA) concluded that $PM_{2.5}$ penetrates even more deeply into the lungs, and this is more likely to contribute to health effects. These health effects include premature death in people with heart or lung disease, non-fatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing). Motor vehicles are currently responsible for about half of particulates in the SFBAAB. Wood burning in fireplaces and stoves is another large source of fine particulates.

Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individual with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms. Diesel particulate matter (DPM) is classified a carcinogen by the California Air Resources Board (ARB). The SFBAAB is designated nonattainment under the California AAQS for PM_{10} and nonattainment under both the California and National AAQS for $PM_{2.5}$.[4]

Ozone (O_3) is a gas that is formed when ROGs and NO_X, both byproducts of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable condition to the formation of this pollutant. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. O_3 levels usually build up during the day and peak in the afternoon hours. Short-term exposure can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Chronic exposure to high ozone levels can permanently damage lung tissue. O_3 can also damage

[4] On January 9, 2013, the EPA issued a final rule to determine that the SFBAAB has attained the 24-hour $PM_{2.5}$ NAAQS. This action suspends federal State Implementation Plan planning requirements for the Bay Area. The SFBAAB will continue to be designated nonattainment for the National 24-hour $PM_{2.5}$ standard until such time as the BAAQMD elects to submit a redesignation request and a maintenance plan to the EPA and the EPA approves the proposed redesignation.

plants and trees and materials such as rubber and fabrics. The SFBAAB is designated nonattainment of the 1-hour California AAQS and 8-hour California and National AAQS for O_3.

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

Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the EPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The EPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically. The SFBAAB is designated in attainment of the California and National AAQS for lead. Because emissions of lead are found only in projects that are permitted by the BAAQMD, lead is not an air quality of concern for the proposed project.

Toxic Air Contaminants

Concentrations of TACs are also used as indicators of air quality conditions. TACs are defined as air pollutants that may cause or contribute to an increase in mortality or serious illness or pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at very low concentrations. TACs can cause long-term health effects (such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage) or short-term acute affects (such as eye watering, respiratory irritation, runny nose, throat pain, or headaches). For TACs that may cause cancer, all concentrations present some risk. In other words, there is no threshold level below which some adverse health impacts are not expected to occur. This contrasts with the criteria pollutants such as nitrogen dioxide and carbon dioxide for which acceptable levels of exposure can be determined. The State and federal governments set AAQS.

TACs are separated into carcinogens and noncarcinogens based on the physiological effects associated with exposure to a particular TAC. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. Cancer risk is typically expressed as excess cancer cases per million exposed individuals, typically over a lifetime exposure or other prolonged duration. There is generally an assumed safe level of exposure for noncarcinogenic substances below which no negative health impact is believed to occur. These levels may vary depending on the specific pollutant. Acute and chronic exposure to noncarcinogens is expressed as a hazard index (HI), which is the ratio of expected exposure levels to an acceptable Reference Exposure Level (REL).

To date, the ARB has designated nearly 200 compounds as TACs. The ARB has implemented control measures for several compounds that pose high risks and show potential for effective control. The majority of the estimated health risk from TACs can be attributed to a relatively few compounds, the

most important being DPM from diesel-fueled engines. Common TACs of national and California concern include DPM, ROG, benzene, asbestos, hydrogen sulfide, sulfates, visibility-reducing particulates, vinyl chloride, and lead. Table 3.2-4 provides a summary of the types, sources, and effects of TACs.

Table 3.2-4: Description of Toxic Air Contaminants of National and California Concern

Toxic Air Contaminant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Diesel Particulate Matter (DPM)	DPM is a source of $PM_{2.5}$—diesel particles are typically 2.5 microns and smaller. Diesel exhaust is a complex mixture of thousands of particles and gases that is produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total particulate matter mass, which consists of compounds such as hydrocarbons and their derivatives, and polycyclic aromatic hydrocarbons and their derivatives. Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are found in diesel exhaust.	Diesel exhaust is a major source of ambient particulate matter pollution in urban environments. Typically, the main source of DPM is from combustion of diesel fuel in diesel-powered engines. Such engines are in on-road vehicles such as diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction equipment.	Some short-term (acute) effects of DPM exposure include eye, nose, throat, and lung irritation, coughs, headaches, light-headedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure.
ROGs	Reactive organic gases (ROGs), also commonly referred to as volatile organic compounds (VOCs), are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably.	Indoor sources of ROGs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of ROGs are from combustion and fuel evaporation. A reduction in ROG emissions reduces certain chemical reactions that contribute to the formulation of ozone. ROGs are transformed into organic aerosols in the atmosphere, which contribute to higher PM_{10} and lower visibility.	Although health-based standards have not been established for ROGs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of ROGs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, the kidneys, and the central nervous system. Many ROGs have been classified as toxic air contaminants (TACs).

Toxic Air Contaminant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Benzene	Benzene is an ROG. It is a clear or colorless light-yellow, volatile, highly flammable liquid with a gasoline-like odor. The EPA has classified benzene as a "Group A" carcinogen.	Benzene is emitted into the air from fuel evaporation, motor vehicle exhaust, tobacco smoke, and from burning oil and coal. Benzene is used as a solvent for paints, inks, oils, waxes, plastic, and rubber. Benzene occurs naturally in gasoline at one to 2 percent by volume. The primary route of human exposure is through inhalation.	Short-term (acute) exposure of high doses from inhalation of benzene may cause dizziness, drowsiness, headaches, eye irritation, skin irritation, and respiratory tract irritation, and at higher levels, loss of consciousness can occur. Long-term (chronic) occupational exposure of high doses has caused blood disorders, leukemia, and lymphatic cancer.
Asbestos	Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite.	Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States.	Exposure to asbestos is a health threat; exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs). Exposure to asbestos can occur during demolition or remodeling of buildings that were constructed prior to the 1977 ban on asbestos for use in buildings. Exposure to naturally occurring asbestos can occur during soil-disturbing activities in areas with deposits present.
Hydrogen Sulfide	Hydrogen sulfide (H_2S) is a flammable, colorless, poisonous gas that smells like rotten eggs.	Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide. Anthropogenic sources include the combustion of sulfur containing fuels (oil and coal).	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.
Sulfates	Sulfates occur in combination with metal and/or hydrogen ions. Many sulfates are soluble in water.	Sulfates are particulates formed through the photochemical oxidation of sulfur dioxide. In California, the main source of sulfur	(a) Decrease in ventilatory function; (b) aggravation of asthmatic symptoms;

Toxic Air Contaminant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
		compounds is combustion of gasoline and diesel fuel.	(c) aggravation of cardiopulmonary disease; (d) vegetation damage; (e) degradation of visibility; (f) property damage.
Visibility-reducing Particles	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM_{10} refers to particulate matter that is between 2.5 and 10 microns in diameter (1 micron is one-millionth of a meter). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter, about one-thirtieth the size of the average human hair.	Stationary sources include fuel or wood combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal; and recycling. Mobile or transportation-related sources are from vehicle exhaust and road dust. Secondary particles form from reactions in the atmosphere.	• Short-term exposure (hours/days): irritation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravates existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias. • Long-term exposure: reduced lung function; chronic bronchitis; changes in lung morphology; death.
Vinyl Chloride	Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, the California Air Resources Board (ARB) identified vinyl chloride as a toxic air contaminant and estimated a cancer unit risk factor.	Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances are left to decompose in solid waste landfills. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites.	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and brain cancers.
Lead (Pb)	Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. Leaded gasoline was used in motor vehicles until around 1970. Lead concentrations have not exceeded State or federal standards at any monitoring station since 1982.	Lead ore crushing, lead ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering.	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction, behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs.

Toxic Air Contaminant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Sources: California Air Resources Board (ARB). 2021. Vinyl Chloride and Health. Website: https://ww2.arb.ca.gov/resources/vinyl-chloride-and-health. Accessed April 19, 2022. California Office of Environmental Health Hazard Assessment (OEHHA). 2001. Health Effects of Diesel Exhaust. Website: https://oehha.ca.gov/air/health-effects-diesel-exhaust#:~:text=Diesel%20exhaust%20can%20irritate%20the,such%20as%20dust%20and%20pollen. Accessed April 19, 2022. National Archives and Records Administration. 2009. Part II, United States Environmental Protection Agency. 40 Code of Federal Regulations Parts 50 and 58, Primary National Ambient Air Quality Standard (NAAQS) for Nitrogen Dioxide; Proposed Rule. July 15. Website: https://www.gpo.gov/fdsys/pkg/FR-2009-07-15/pdf/E9-15944.pdf. Accessed April 19, 2022. National Toxicology Program. 2016. Report on Carcinogens, 14th Edition; U.S. Department of Health and Human Services, Public Health Service. Benzene. November 3. Website: http://ntp.niehs.nih.gov/ntp/roc/twelfth/profiles/Benzene.pdf. Accessed April 19, 2022. National Toxicology Program. 2016. Report on Carcinogens, 14th Edition; U.S. Department of Health and Human Services, Public Health Service. Diesel Exhaust Particles. November 3. Website: https://ntp.niehs.nih.gov/ntp/roc/content/profiles/dieselexhaustparticulates.pdf. Accessed April 19, 2022. South Coast Air Quality Management District (SCAQMD). 2007. Final 2007 Air Quality Management Plan. June. Website: https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2007-air-quality-management-plan/2007-AQP-final-document.pdf?sfvrsn=2. Accessed April 19, 2022. United States Environmental Protection Agency (EPA). 2016. Nitrogen Dioxide (NO_2) Pollution. Basic Information about NO_2. Website: https://www.epa.gov/no2-pollution/basic-information-about-no2#What%20is%20NO2. Accessed April 19, 2022.			

3.2.4 - Sensitive Receptors

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

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

3.2.5 - Regulatory Framework

Clean Air Act

Congress established much of the basic structure of the Clean Air Act (CAA) in 1970 and made major revisions in 1977 and 1990. The CAA addresses six common air pollutants (also known as criteria pollutants). These are PM, ground-level ozone, CO, sulfur oxides, nitrogen oxides, and lead. The EPA

calls these pollutants criteria air pollutants because it regulates them by developing human health-based and/or environmentally based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health are called primary standards. Another set of limits intended to prevent environmental and property damage are called secondary standards.[5] The federal standards are called NAAQS. The air quality standards provide benchmarks for determining whether air quality is healthy at specific locations and whether development activities will cause or contribute to a violation of the standards. The criteria pollutants are:

- Ozone
- Nitrogen dioxide
- Lead
- Particulate matter (PM_{10} and $PM_{2.5}$)
- Carbon monoxide
- Sulfur dioxide

The federal standards were set to protect public health, including that of sensitive individuals; thus, the EPA is tasked with updating the standards as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health.

The CAA also requires each state to prepare an Air Quality Plan (AQP) referred to as a State Implementation Plan (SIP). The federal CAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies.

EPA Emission Standards for New Off-Road Equipment

Before 1994, there were no standards to limit the amount of emissions from off-road equipment. In 1994, the EPA established emission standards for hydrocarbons, NO_X, CO, and PM to regulate new pieces of off-road equipment. These emission standards came to be known as Tier 1. Since that time, the EPA and ARB have adopted increasingly more stringent Tier 2, Tier 3, and Tier 4 (interim and final) standards. Each adopted emission standard was phased in over time. New engines built in and after 2015 across all horsepower sizes must meet Tier 4 final emission standards. In other words, new manufactured engines cannot exceed the emissions established for Tier 4 final emissions standards.

State

California Air Quality Control Plan (State Implementation Plan)

A SIP is a document prepared by each State describing existing air quality conditions and measures intended to attain and maintain federal standards. The SIP for the State of California is administered by the ARB, which has overall responsibility for Statewide air quality maintenance and air pollution prevention. California's SIP incorporates individual federal attainment plans for regional air districts—an air district prepares their federal attainment plan and sends it to the ARB for approval and incorporation into the California SIP.

[5] United States Environmental Protection Agency (EPA). 2021. Clean Air Act Requirements and History. Website: https://www.epa.gov/clean-air-act-overview/clean-air-act-requirements-and-history. Accessed April 25, 2022.

Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms for attaining and maintaining air quality standards.

Areas designated nonattainment must develop AQPs and regulations to achieve standards by specified dates, depending on the severity of the exceedances. For much of the country, implementation of federal motor vehicle standards and compliance with federal permitting requirements for industrial sources are adequate to attain air quality standards on schedule. For many areas of California, however, additional State and local regulation is required to achieve the standards.

California Clean Air Act

The California Legislature enacted the California Clean Air Act (CCAA) in 1988 to address air quality issues of concern not adequately addressed by the federal CAA at the time. California's air quality problems were and continue to be some of the most severe in the nation, and required additional actions beyond the federal mandates. The ARB administers the CAAQS for the 10 air pollutants designated in the CCAA. The 10 State air pollutants are the six federal standards listed above as well as visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride. The EPA authorized California to adopt its own regulations for motor vehicles and other sources that are more stringent than similar federal regulations implementing the CAA. Generally, the planning requirements of the CCAA are more stringent than the federal CAA; therefore, consistency with the CAA will also demonstrate consistency with the CCAA.

Other ARB responsibilities include but are not limited to overseeing local air district compliance with California and federal laws; approving local AQPs; submitting SIPs to the EPA; monitoring air quality; determining and updating area designations and maps; conducting basic research aimed at providing a better understanding between emissions and public well-being, and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

California Health and Safety Code Section 39655 and California Code of Regulations Title 17 Section 93000 (Substances Identified as Toxic Air Contaminants)

The ARB identifies substances as TACs as defined in Health and Safety Code Section 39655 and listed in Title 17, Section 93000 of the California Code of Regulations, "Substances Identified As Toxic Air Contaminants." A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. In general, for those TACs that may cause cancer, regulatory agencies set thresholds below which adverse health impacts are not expected to occur. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the State and federal governments have set AAQS. According to the California Almanac of Emissions and Air Quality, the majority of the estimated health risk from TACs for the State of California can be attributed to relatively few compounds, the most important of which is DPM from diesel-fueled engines.

California Low-Emission Vehicle Program

The ARB first adopted low-emission vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 SIP. In 2012, the ARB adopted the LEV III amendments to California's LEV regulations. These amendments, also known as the Advanced Clean Car Program, include more stringent emission standards for model years 2017 through 2025 for both criteria pollutants and greenhouse gas (GHG) emissions for new passenger vehicles.[6]

California On-Road Heavy-Duty Vehicle Program

The ARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. Section 1956.8, Title 13, California Code of Regulations contains California's emission standards for on-road heavy-duty engines and vehicles, and test procedures. The ARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others.[7]

California In-Use Off-Road Diesel Vehicle Regulation

On July 26, 2007, the ARB adopted a regulation to reduce DPM and NO_X emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. The ARB is enforcing that part of the rule with fines up to $10,000 per day for each vehicle in violation. Performance requirements of the rule are based on a fleet's average NO_X emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements, making the first compliance deadline January 1, 2014, for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).

The latest amendments to the Truck and Bus regulation became effective on December 31, 2014. The amended regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet PM filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent.

The regulation applies to nearly all privately and federally owned diesel-fueled trucks and buses and privately and publicly owned school buses with a gross vehicle weight of greater than 14,000

[6] California Air Resources Board (ARB). 2022. California's Greenhouse Gas Vehicle Emission Standards under Assembly Bill 1493 of 2002 (Pavley). Website: http://www.arb.ca.gov/cc/ccms/ccms.htm. Accessed April 25, 2022.

[7] California Air Resources Board (ARB). 2013. The California Almanac of Air Quality and Emissions—2013 Edition. Website: http://www.arb.ca.gov/aqd/almanac/almanac13/almanac13.htm. Accessed April 19, 2022.

pounds. The regulation provides various flexibility options tailored to fleets operating low-use vehicles, fleets operating in selected vocations like agricultural and construction, and small fleets of three or fewer trucks.[8]

California Airborne Toxic Control Measures for Asbestos

The ARB has adopted Airborne Toxic Control Measures (ATCM) for sources that emit a particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technology to minimize emissions.

In July 2001, the ARB approved an ATCM for construction, grading, quarrying and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of Best Management Practices (BMPs) to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification and engineering controls prior to grading, quarrying, or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at work sites larger than one acre in size. These projects require the submittal of a “Dust Mitigation Plan” and approval by the ARB prior to the start of a project.

Construction sometimes requires the demolition of existing buildings where construction occurs. Asbestos is also naturally occurring. Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, is associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

The ARB has an ATCM for construction, grading, quarrying, and surface mining operations, requiring the implementation of mitigation measures to minimize emissions of asbestos-laden dust. The measure applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely found. Areas are subject to the regulation if they are identified on maps published by the United States Geological Survey (USGS) as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity.

Verified Diesel Emission Control Strategies

The ARB has developed Verified Diesel Emission Control Strategies (VDECS), which are devices, systems, or strategies used to achieve the highest level of pollution control from existing off-road

[8] California Air Resources Board (ARB). 2015. On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation. Website: https://ww2.arb.ca.gov/our-work/programs/truck-and-bus-regulation. Accessed April 19, 2022.

vehicles, to help reduce emissions from existing engines. VDECS are designed primarily for the reduction of DPM emissions and have been verified by the ARB. There are three levels of VDECS, the most effective of which is the Level 3 VDECS. Tier 4 engines are not required to install VDECS because they already meet the emissions standards for lower tiered equipment with installed controls.

California Diesel Risk Reduction Plan

The ARB Diesel Risk Reduction Plan has led to the adoption of new State regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines, and vehicles to reduce DPM emissions in 2020 by about 90 percent overall from year 2000 levels. The projected emission benefits associated with the full implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75 percent by 2010, and 85 percent by 2020.[9]

Tanner Air Toxics Act and Air Toxics Hot Spots Information and Assessment Act

TACs in California are primarily regulated through the Tanner Air Toxics Act (Assembly Bill [AB] 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588), also known as the Hot Spots Act. To date, the ARB has identified more than 21 TACs, and has adopted the EPA's list of Hazardous Air Pollutants (HAPs) as TACs.

Carl Moyer Memorial Air Quality Standards Attainment Program

The Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program), a partnership between the ARB and local air districts, issues grants to replace or retrofit older engines and equipment with engines and equipment that exceed current regulatory requirements to reduce air pollution. Money collected through the Carl Moyer Program complements California's regulatory program by providing incentives to effect early or extra emission reductions, especially from emission sources in environmental justice communities and areas disproportionately affected by air pollution. The program has established guidelines and criteria for the funding of emissions reduction projects. Within the Air Basin, the BAAQMD administers the Carl Moyer Program. The program has established guidelines and criteria for the funding of emissions reduction projects and has established cost-effectiveness criteria for funding emission reductions projects, which under the final 2017 Carl Moyer Program Guidelines are $30,000 per weighted ton of NO_X, ROG, and PM.[10]

Regional

BAAQMD California Environmental Quality Act Air Quality Guidelines

The BAAQMD is the primary agency responsible for ensuring that air quality standards (NAAQS and CAAQS) are attained and maintained in the SFBAAB through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The BAAQMD prepares plans to attain AAQS in the SFBAAB, prepares ozone attainment plans for the national ozone standard, clean air plans for the California standard, and PM plans to fulfill federal air quality planning requirements. The BAAQMD also inspects stationary sources of air

[9] California Air Resources Board (ARB). 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October. Website: http://www.arb.ca.gov/diesel/documents/rrpfinal.pdf. Accessed April 25, 2022.

[10] California Air Resources Board (ARB). 2017. The Carl Moyer Program Guidelines: 2017 Revisions – Volume I. June 20. Website: https://ww2.arb.ca.gov/sites/default/files/classic/msprog/moyer/guidelines/2017/2017_cmpgl.pdf. Accessed April 25, 2022.

pollution; responds to citizen complaints; monitors ambient air quality and meteorological conditions; and implements programs and regulations required by the CAA, the CAA Amendments of 1990, and the CCAA.

The BAAQMD developed quantitative thresholds of significance for its California Environmental Quality Act (CEQA) Guidelines in 2010, which were also included in its updated 2011 Guidelines. The BAAQMD's adoption of the 2010 thresholds of significance was later challenged in court. In an opinion issued on December 17, 2015, related to the BAAQMD CEQA Guidelines, the California Supreme Court held that CEQA does not generally require an analysis of the impacts of locating development in areas subject to environmental hazards unless the project would exacerbate existing environmental hazards. The California Supreme Court also found that CEQA requires the analysis of exposing people to environmental hazards in specific circumstances, including the location of development near airports, schools near sources of toxic contamination, and certain exemptions for infill and workforce housing. The California Supreme Court also held that public agencies remain free to voluntarily conduct this analysis not required by CEQA for their own public projects (*CBIA v. BAAQMD* (2016) 2 Cal.App.5th 1067, 1083).

In view of the California Supreme Court's opinion, the BAAQMD published a new version of its CEQA Guidelines in May 2017. The BAAQMD CEQA Guidelines state that local agencies may rely on thresholds designed to reflect the impact of locating development near areas of toxic air contamination where CEQA requires such an analysis, or where the agency has determined that such an analysis would assist in making a decision about the proposed project. However, the thresholds are not mandatory, and agencies should apply them only after determining that they reflect an appropriate measure of a project's impacts. The BAAQMD's guidelines for implementing the thresholds are for informational purposes only, to assist local agencies.

BAAQMD Particulate Matter Plan

To fulfill federal air quality planning requirements, the BAAQMD adopted a $PM_{2.5}$ emissions inventory for the year 2010 at a public hearing on November 7, 2012. The Bay Area Clean Air Plan also included several measures for reducing PM emissions from stationary sources and wood burning. On January 9, 2013, the EPA issued a final rule determining that the Bay Area has attained the 24-hour $PM_{2.5}$ NAAQS, suspending federal SIP planning requirements for the SFBAAB.[11] Despite this EPA action, the SFBAAB will continue to be designated as nonattainment for the national 24-hour $PM_{2.5}$ standard until the BAAQMD submits a redesignation request and a maintenance plan to the EPA, and the EPA approves the proposed redesignation.

The Air Basin is designated nonattainment for the State PM_{10} and $PM_{2.5}$ standards, but the Air Basin is currently unclassified for the federal PM_{10} standard and nonattainment for federal $PM_{2.5}$ standards. The EPA lowered the 24-hour $PM_{2.5}$ standard from 65 $\mu g/m^3$ to 35 $\mu g/m^3$ in 2006, and designated the Air Basin as nonattainment for the new $PM_{2.5}$ standard effective December 14, 2009.

[11] United States Environmental Protection Agency (EPA). 2013. Determination of Attainment for the San Francisco Bay Area Nonattainment Area for the 2006 Fine Particle Standard; California; Determination Regarding Applicability of Clean Air Act Requirements. Website: https://www.govinfo.gov/content/pkg/FR-2013-01-09/pdf/2013-00170.pdf. Accessed April 19, 2022.

On December 8, 2011, the ARB submitted a "clean data finding" request to the EPA on behalf of the Bay Area. If the clean data finding request is approved, then EPA guidelines provide that the region can fulfill federal $PM_{2.5}$ SIP requirements by preparing either a redesignation request and a $PM_{2.5}$ maintenance plan, or a "clean data" SIP submittal. Because peak $PM_{2.5}$ levels can vary from year to year based on natural, short-term changes in weather conditions, the BAAQMD believes that it would be premature to submit a redesignation request and $PM_{2.5}$ maintenance plan at this time. Therefore, the BAAQMD will prepare a "clean data" SIP to address the required elements, including:

- An emission inventory for primary $PM_{2.5}$, as well as precursors to secondary PM formation
- Amendments to the BAAQMD's New Source Review regulation to address $PM_{2.5}$

BAAQMD 2017 Clean Air Plan

On May 2017, the BAAQMD adopted the final Bay Area 2017 Clean Air Plan. The 2017 Clean Air Plan was prepared by the BAAQMD in cooperation with the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG). The goals of the 2017 Clean Air Plan are to reduce regional air pollutants and climate pollutants to improve the health of Bay Area residents for the next decades. The 2017 Clean Air Plan aims to lead the region into a post-carbon economy, continue progress toward attaining all State and federal air quality standards, and eliminate health risk disparities from air pollution exposure in Bay Area communities. The Plan includes 85 distinct control measures to help the region reduce air pollutants and has a long-term strategic vision that forecasts what a clean air Bay Area will look like in year 2050:

- Buildings will be energy efficient—heated, cooled and powered by renewable energy.
- Transportation will be a combination of electric vehicles, both shared and privately owned; autonomous public transit fleets; with a large share of trips by bicycling, walking, and transit.
- The Bay Area will be powered by clean, renewable electricity and will be a leading incubator and producer of clean energy technologies leading the world in the carbon-efficiency of our products.
- Bay Area residents will have developed a low carbon lifestyle by driving electric vehicles, living in zero-net-energy homes, eating low carbon foods, and purchasing goods and services with low carbon content.
- Waste will be greatly reduced, waste products will be re-used or recycled, and all organic waste will be composted and put to productive use.

The focus of control measures includes aggressively targeting the largest source of GHG, ozone pollutants and PM emissions—transportation. This includes more incentives for electric vehicle infrastructure, off-road electrification projects such as Caltrain and shore power at ports, and reducing emissions from trucks, school buses, marine vessels, locomotives, and off-road equipment. Additionally, the BAAQMD will continue to work with regional and local governments to reduce Vehicle Miles Traveled (VMT) through the further funding of rideshare, bike and shuttle programs.

BAAQMD Regulations

Regulation 2, Rule 1 (Permits–General Requirements)

The BAAQMD regulates new sources of air pollution and the modification and operation of existing sources through the issuances of authorities to construct and permits to operate. Regulation 2, Rule 1 provides an orderly procedure which the project would be required to comply with to receive authorities to construct or permits to operate from the BAAQMD for new sources of air pollutants, as applicable.

Regulation 2, Rule 5 (New Source Review Permitting)

The BAAQMD regulates backup emergency generators, fire pumps, and other sources of TACs through its New Source Review (Regulation 2, Rule 5) permitting process.[12] Although emergency generators are intended for use only during periods of power outages, monthly testing of each generator is required; however, the BAAQMD limits testing to no more than 50 hours per year. Each emergency generator installed is assumed to meet a minimum of Tier 2 emission standards (before control measures). As part of the permitting process, the BAAQMD limits the excess cancer risk from any facility to no more than 10 per 1-million-population for any permits that are applied for within a 2-year period and would require any source that would result in an excess cancer risk greater than 1 per 1 million to install Best Available Control Technology (BACT) for Toxics.

Regulation 6, Rule 1 (Particulate Matter–General Requirements)

The BAAQMD regulates particulate matter emissions through Regulation 6 by means of establishing limitations on emission rates, emissions concentrations, and emission visibility and opacity. Regulation 6, Rule 1 provides existing standards for particulate matter emissions that could result during project construction or operation that the project would be required to comply with, as applicable, such as the prohibition of emissions from any source for a period or aggregate periods of more than three minutes in any hour which are equal to or greater than 20 percent opacity.

Regulation 6, Rule 6, (Particulate Matter–Prohibition of Trackout)

One rule by which the BAAQMD regulates particulate matter includes Regulation 6, Rule 6, which prohibits particulate matter trackout during project construction and operation. Regulation 6, Rule 6 requires the prevention or timely cleanup of trackout of solid materials onto paved public roads outside the boundaries of large bulk material sites, large construction sites, and large disturbed surface sides such as landfills.

Regulation 8, Rule 3 (Architectural Coatings)

This rule governs the manufacture, distribution, and sale of architectural coatings and limits the ROG content in paints and paint solvents. Although this rule does not directly apply to the proposed project, it does dictate the ROG content of paint available for use during the construction.

[12] Bay Area Air Quality Management District (BAAQMD). 2016. New Source Review Permitting Guidance. Website: http://www.baaqmd.gov/permits/permitting-manuals/nsr-permitting-guidance. Accessed April 19, 2022.

Regulation 8, Rule 15 (Emulsified and Liquid Asphalts)

Although this rule does not directly apply to the proposed project, it does dictate the reactive organic gases content of asphalt available for use during the construction through regulating the sale and use of asphalt and limits the ROG content in asphalt.

Regulation 9, Rule 8 (Inorganic Gaseous Pollutants–Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines)

Under Regulation 9, Rule 8, the BAAQMD regulates the emissions of nitrogen oxides and carbon monoxide from stationary internal combustion engines with an output rated by the manufacturer at more than 50 brake horsepower. As such, any proposed stationary source equipment (e.g., backup generators, fire pumps) which would be greater than 50 horsepower would require a BAAQMD permit under Regulation 9, Rule 8 to operate.

Regulation 11, Rule 2 (Hazardous Pollutants–Asbestos Demolition, Renovation, and Manufacturing)

Under Regulation 11, Rule 2, the BAAQMD regulates emissions of asbestos to the atmosphere during demolition, renovation, milling, and manufacturing, and establish appropriate waste disposal procedures. Any of these activities which pose the potential to generate emissions of airborne asbestos are required to comply with the appropriate provisions of this regulation.

Regulation 1, Rule 301 (Odorous Emissions)

The BAAQMD is responsible for investigating and controlling odor complaints in the Bay Area. The agency enforces odor control by helping the public to document a public nuisance. Upon receipt of a complaint, the BAAQMD sends an investigator to interview the complainant and to locate the odor source if possible. The BAAQMD typically brings a public nuisance court action when there are a substantial number of confirmed odor events within a 24-hour period. An odor source with five or more confirmed complaints per year, averaged over 3 years is considered to have a substantial effect on receptors.

Several BAAQMD regulations and rules apply to odorous emissions. Regulation 1, Rule 301 is the nuisance provision that states that sources cannot emit air contaminants that cause nuisance to several people. Regulation 7 specifies limits for the discharge of odorous substances where the BAAQMD receives complaints from 10 or more complainants within a 90-day period. Among other things, Regulation 7 precludes discharge of an odorous substance that causes the ambient air at or beyond the property line to be odorous after dilution with four parts of odor-free air and specifies maximum limits on the emission of certain odorous compounds.

Lastly, the BAAQMD enforces the Portable Equipment Registration Program (PERP) ATCM on behalf of the ARB. Under the PERP, owners or operators of portable engines and other types of equipment which meet the qualifications of the ATCM can register their equipment to operate throughout California. However, owners and operators of portable engines which meet the qualifications of this ATCM that do not register their equipment under the PERP must obtain individual permits from local air districts. Permits issued under the PERP must be honored by all air districts throughout California.

Community Air Risk Evaluation Program

The BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposure to outdoor TACs in the Bay Area. Based on findings of the latest report, DPM was found to account for approximately 85 percent of the cancer risk from airborne toxics.

Carcinogenic compounds from gasoline-powered cars and light-duty trucks were also identified as significant contributors: 1,3-butadiene contributed 4 percent of the cancer risk-weighted emissions, and benzene contributed 3 percent. Collectively, five compounds (DPM, 1,3-butadiene, benzene, formaldehyde, and acetaldehyde) were found to be responsible for more than 90 percent of the cancer risk attributed to emissions. All of these compounds are associated with emissions from internal combustion engines. The most important sources of cancer risk-weighted emissions were combustion-related sources of DPM, including on-road mobile sources (31 percent), construction equipment (29 percent), and ships and harbor craft (13 percent). A 75 percent reduction in DPM was predicted between 2005 and 2015 when the inventory accounted for the ARB's diesel regulations. Overall, cancer risk from TAC dropped by more than 50 percent between 2005 and 2015, when emissions inputs accounted for State diesel regulations and other reductions.[13]

Modeled cancer risks from TAC in 2005 were highest near sources of DPM: near core urban areas, along major roadways and freeways, and near maritime shipping terminals. Peak modeled risks were found to be located east of San Francisco, near West Oakland and the Maritime Port of Oakland. BAAQMD has identified seven impacted communities in the Bay Area:

- Western Contra Costa County and the cities of Richmond and San Pablo
- Western Alameda County along the Interstate 880 (I-880) corridor and the cities of Berkeley, Alameda, Oakland, and Hayward
- San José
- Eastern side of San Francisco
- Concord
- Vallejo
- Pittsburgh and Antioch

The eastern side of San Francisco is the closest CARE program impacted community to South San Francisco. The City of South San Francisco is not located within this impacted community.

The major contributor to acute and chronic non-cancer health effects in the Air Basin is acrolein (C_3H_4O), an air pollutant resulting from on-road mobile sources and aircraft near freeways and commercial and military airports.[14] Acrolein is primarily used as an intermediate in the synthesis of acrylic acid and as a biocide. It may be formed from the breakdown of certain pollutants in outdoor

[13] Bay Area Air Quality Management District (BAAQMD). 2014. Improving Air Quality and Health in Bay Area Communities, Community Air Risk Evaluation Program Retrospective and Path Forward. April.

[14] Bay Area Air Quality Management District (BAAQMD). 2006. Community Air Risk Evaluation Program, Phase I Findings and Policy Recommendations Related to TACs in the San Francisco Bay Area. September.

air or from the burning of organic matter including tobacco, or fuels such as gasoline or oil. Acute inhalation exposure may result in upper respiratory tract irritation and congestion.[15]

Plan Bay Area

On July 18, 2013, ABAG and the MTC approved the Plan Bay Area. The Plan Bay Area includes integrated land use and transportation strategies for the region and was developed through OneBayArea, a joint initiative between ABAG, BAAQMD, MTC, and the San Francisco Bay Conservation and Development Commission (BCDC). The plan's transportation policies focus on maintaining the extensive existing transportation network and utilizing these systems more efficiently to handle density in Bay Area transportation cores.[16] Assumptions for land use development come from local and regional planning documents. Emission forecasts in the Bay Area Clean Air Plan rely on projections of VMT, population, employment, and land use projections made by local jurisdictions during development of Plan Bay Area. The Plan Bay Area 2040 was adopted July 2017 and updates Plan Bay Area.[17]

Plan Bay Area 2050, published by the MTC and ABAG, is the latest 30-year long-range strategic plan focused on the interrelated elements of housing, employment, transportation, and the environment. As a regional land use plan, Plan Bay Area 2050 aims to reduce per capita GHG emissions by promoting more compact, mixed-use residential and commercial neighborhoods located near transit. Plan Bay Area 2050 is a limited and focused update that builds upon a growth pattern and strategies developed in the original Plan Bay Area (adopted by MTC in 2013) but with updated planning assumptions that incorporate key economic, demographic, and land use pattern trends from the last 4 years.

Local

South San Francisco General Plan Update

The General Plan Update includes the following relevant policies and actions that assist in reducing or avoiding potential impacts related to air quality:

Land Use and Community Design Element

Policy LU-1.1 Support mixed-use activity centers. Support a network of vibrant mixed-use activity centers located throughout the City. Mixed-use centers should include business and services, housing, healthy food, parks, and other gathering places.

Action LU-1.1.2 Implement mixed-use rezoning. Identify key activity areas that currently feature single-use commercial or residential zoning designations, and re-zone to allow for mixed-use development that could provide more convenient access to local commercial.

[15] United States Environmental Protection Agency (EPA). 2009. Acrolein. September.
[16] Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC). 2013. Plan Bay Area. Website: https://www.planbayarea.org/previous-plan/plan-bay-area. Accessed April 19, 2022.
[17] Association of Bay Area Governments (ABAG). 2017. Plan Bay Area 2040. Website: https://www.planbayarea.org/plan-bay-area-2040. Accessed April 19, 2022.

Action LU-1.1.3 Complete neighborhoods study. Initiate a study to determine appropriate locations for siting everyday needs, including services, healthy food, public facilities, and shopping within a short walk, bike, or transit trip of all residents.

Policy LU-1.2 Connectivity in complete neighborhoods. Improve walk, bike, and accessibility in complete neighborhoods.

Action LU-1.2.1 Department coordination for complete neighborhoods planning. Ensure coordination between the Economic and Community Development and Public Works Departments to align needed transportation improvement projects with land use planning in complete neighborhoods.

Policy LU-2.1 Prioritize development near transit centers. Collaborate with developers and property owners to locate new housing, mixed use, and employment uses near transit centers to minimize reliance on personal automobiles.

Action LU-2.1.2 Develop Specific Plans around transit centers. Initiate a request for proposals (RFP) process to develop specific plans around key transit centers, including Caltrain and BART.

Action LU-2.1.4 Community benefits framework. Continue to update the community benefits framework that require new nonresidential development near transit centers to contribute to community goals and amenities, including parks, and public spaces, affordable housing, and transportation demand management.

Policy LU-4.4 Improve pedestrian and bicycle connectivity in residential neighborhoods. Link existing residential neighborhoods by providing convenient pedestrian and bicycle connections to nearby destinations, such as parks, public facilities, and shopping centers.

Sub-Areas Element

Policy SA-17.4 Create standards for housing design that mitigate for air quality impacts. For housing within 500 feet of highways and stationary sources of pollution, require design mitigation actions including:

- Locate air intake systems for heating, ventilation, and air conditioning (HVAC) systems as far away from existing air pollution sources as possible.
- Using high-efficiency particulate matter (HEPA) filters in the HVAC system and develop a maintenance plan to ensure the filtering system is properly maintained.
- Use only fixed windows next to any existing sources of pollution.
- Plant landscape barriers between highways and residential areas to reduce noise and air pollution from residents.

Policy SA-28.5 Require sustainable and environmentally sensitive design. Incorporate sustainable and environmentally sensitive design and equipment, energy conservation features, water conservation measures and drought-tolerant or equivalent landscaping, and sustainable stormwater management features.

Policy SA-32.5 Create buffering from US-101. Create landscaping buffers and other buffers to reduce noise, visual, and air quality impacts from US-101.

A Prosperous Economy for All Element

Policy PE-2.1 Reinvest in industrial property. Within areas targeted for retention of industrial uses, support industrial property owners seeking to reinvest in and modernize their properties and come into compliance with environmental regulations, current building codes, and use/production of green energy.

Community Health and Environmental Justice

Policy CHEJ-3.1 Support regional efforts to improve air quality and protect human health.

Action CHEJ-3.1.1 Monitor air quality in Lindenville, East of 101 and Downtown. Work with the Bay Area Air Quality Management District to establish and identify funding for air quality monitoring and reduction strategies. This action may include purchasing particulate matter ($PM_{2.5}$) monitors to track local air quality data in Lindenville, East of 101, and Downtown.

Policy CHEJ-3.2 Reduce mobile source pollution. Reduce emissions from mobile sources of air pollution, such as diesel-based trucks and vehicles that travel to, from, or through South San Francisco.

Action CHEJ-3.2.1 Maintain Truck route map to minimize exposure. Maintain an up-to-date truck routes map that minimizes exposures to sensitive land uses. Prohibit the designation of new truck routes on local neighborhood streets in South San Francisco.

Action CHEJ-3.2.2 Adopt an ordinance establishing vehicle idling restrictions. Establish a local ordinance that exceeds the State vehicle idling restrictions where appropriate, including restrictions for bus layovers, delivery vehicles, trucks at warehouses and distribution facilities and taxis, particularly when these activities take place near sensitive land uses (schools, healthcare facilities, affordable housing, and elder and childcare centers). Manage truck idling in new residential neighborhoods in Lindenville and East of 101.

Policy CHEJ-3.3 Support businesses transitioning their operations to emit fewer air pollutants. Support local business owners in transitioning their operations to emit fewer air pollutants through incentives and development standards.

Action CHEJ-3.3.1 Explore incentives for pollution reduction. Explore opportunities for production, distribution, and warehousing uses in Lindenville and East of 101 to reduce pollution, such as greener trucks, energy efficient buildings, and other strategies.

Action CHEJ-3.3.2 Reduce indoor air pollution. Explore opportunities to work with property owners to rehabilitate existing buildings and require that new buildings adjacent to production, distribution, and warehousing uses; highways; or rail to implement appropriate mitigation measures to reduce indoor air pollution such as air filtration/ventilation systems, landscaping, and other physical improvements as recommended by the California Air Resources Board and/or the Bay Area Air Quality Management District.

Policy CHEJ-3.5 Discourage development of sensitive uses near sources of pollution. Discourage the development of sensitive land uses (schools, healthcare facilities, and elder and childcare centers) within 500 feet of highways and stationary sources of pollution. For sensitive land uses that cannot be sited at least 500 feet away, potential design mitigation actions include:

- Locate air intake systems for heating, ventilation, and air conditioning (HVAC) systems as far away from existing air pollution sources as possible.
- Using high-efficiency particulate matter (HEPA) filters in the HVAC system and develop a maintenance plan to ensure the filtering system is properly maintained.
- For nonresidential buildings, consider utilizing only fixed windows next to any existing sources of pollution.
- Plant landscape barriers between highways and residential areas to reduce noise and air pollution from residents.

Policy CHEJ-3.6 Incentivize air filtration in multi-family residential buildings. Connect property owners of existing multi-family residential buildings, especially those in disadvantaged communities, to incentives to install heating, ventilation, and air conditioning systems with high-efficiency particulate air filters for all units.

Community Resilience Element

Policy CR-6.1 Support resilient building design. Support resilient building design by helping residents weatherize homes to keep them cooler and more energy efficient and to improve indoor air quality.

Policy CR-6.5 Coordinate transportation systems with air quality improvements. Promote a transportation system coordinated with air quality improvements.

Climate Protection Element

Policy CP-1.4 Explore innovative pilot programs. Explore the potential for innovative greenhouse gas reduction pilot programs, including collaborations and

partnerships, in each emissions sector (e.g., buildings and energy, transportation, solid waste, water, and carbon sequestration).

Policy CP-3.1 Building code maintenance for new and major renovations (energy efficiency). Regularly update South San Francisco's building codes to improve the energy performance of new construction and major remodels and to phase in requirements in predicable ways.

Action CP-3.1.1 Incentivize energy efficient new construction. Provide incentives to encourage new construction to exceed California's Building Energy Efficiency Standards outlined in Title 24, Part 6.

City of South San Francisco Climate Action Plan

The Climate Action Plan (CAP) includes the following actions that assist in reducing or avoiding impacts related to air quality:

Action CE 1.1 Adopt solar reach code for nonresidential buildings. Require the construction of any new nonresidential conditioned space of 5,000 square feet or more, or the conversion of unconditioned space 5,000 square feet or more, to meet a minimum of 50 percent of modeled building electricity needs with on-site renewable energy sources, as is feasible. To calculate 50 percent of building electricity needs for the new conditioned space, the applicant shall calculate building electricity use as part of the Title 24 compliance process. Total electricity use shall include total use for the new conditioned space excluding process energy.

Action CE 1.3 Streamline PV system permitting and approval. Establish a streamlined PV system permitting and approval process to encourage the addition of solar PV systems.

Action CE 1.6 Explore community scale solar and other renewable energy implementation. Explore the opportunities to install community scale solar PV or other renewable energy systems including biogas to support local energy resiliency and provide renewable energy to disadvantaged communities.

Action BNC 1.1 Improve the energy efficiency of new construction. Provide a combination of financial and development process incentives (e.g., Expedited permitting, FAR increases, etc.) to encourage new development to exceed Title 24 energy efficiency standard.

Action BNC 1.2 Adopt an all-electric reach code for nonresidential new construction. Implement residential all-electric reach code and adopt all-electric reach code for nonresidential new construction. Exempt occupancies must install electric building systems (e.g., space and water heating equipment) where feasible. Until the adoption of the nonresidential all-electric reach code, require any new nonresidential conditioned space of 5,000 square feet or more, or the

conversion of unconditioned space 5,000 square feet or more to comply with CALGreen Tier 2 energy efficiency requirements to exceed mandatory energy efficiency requirements by 20 percent or more. For additions to existing development of 5,000 square feet or more, CALGreen Tier 2 shall be calculated as part of the Title 24 compliance process. Existing building space already permitted shall not be subject to CALGreen Tier 2 requirements.

Action TL 1.1 Electric Vehicle Charging Reach Code. Implement EV Reach code.

Action TL 2.2 TDM Program. Implement, monitor, and enforce compliance with the City's TDM Ordinance.

Action TL 2.6 Complete Streets Policy. Ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled. Develop a Capital Improvement Program (CIP) prioritization criteria, including equity considerations for SB [Senate Bill] 1000 neighborhoods, to strategically advance multimodal complete streets projects. All capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans.

Action SW 1.1 Zero-Waste Plan. Adopt an SB 1383 compliant zero-waste plan for municipal operations and the community that includes: mandatory residential and commercial recycling and collection of organics/food waste, mandatory commercial edible food recovery program (per MOU with San Mateo County Office of Sustainability), and updated trash enclosure space and access requirements based on hauler recommendations to accommodate all waste streams (e.g., recycling, trash, and organics).

Action WW 1.1 Landscaping Water Requirements. Achieve greater water use reductions than WELO by requiring all landscapes obtain a landscape permit, decreasing the size threshold to capture all landscape renovations, adding prescriptive irrigation plant lists, or water budget requirements.

Action WW 2.1 Indoor Water Efficiency Standards. Require high-efficiency fixtures in all new construction and major renovations, comparable to CALGreen Tier 1 or 2 standards.

City of South San Francisco Municipal Code

Chapter 8.69 Affordable Housing Commercial Linkage Fees

Chapter 8.69 of the Municipal Code seeks to offset the demand for affordable housing that is created by new commercial development by requiring certain commercial development projects to pay a commercial linkage fee, which would offset the demand for affordable housing that is created

by new commercial development and help mitigate impacts that accompany new commercial development by reducing traffic, transit, and related air quality impacts.

Chapter 13.30 Tree Preservation

Chapter 13.30 of the Municipal Code intends to preserve trees in the City in order to counteract air pollution and oxygenate the air.

City of South San Francisco Zoning Ordinance

The following chapters of the South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, assist in reducing or avoiding impacts related to air quality.

Chapter 20.300 Lot Development Standards

Section 20.300.010 (Performance Standards) establishes regulations related to odors and air contaminants as detailed below.

I. Odors. No use, process, or activity shall produce objectionable odors that are perceptible without instruments by a reasonable person at the lot lines of a site. Odors from temporary construction, demolition, and vehicles that enter and leave the subject lot (e.g., construction equipment, trains, trucks, etc.) are exempt from this standard.

K. Air Contaminants. Uses, activities, and processes shall not operate in a manner that emit excessive dust, fumes, smoke, or particulate matter.
   1. Compliance. Sources of air pollution shall comply with rules identified by the Environmental Protection Agency (Code of Federal Regulations, Title 40), the California Air Resources Board, and the Bay Area Air Quality Management District (BAAQMD).
   2. BAAQMD Permit. Operators of activities, processes, or uses that require “approval to operate” from the BAAQMD, shall file a copy of the permit with the Planning Division within 30 days of permit approval.

Section 20.300.008 (Lighting and Illumination) establishes regulations that allow outdoor lighting for uses and activities consistent with the need for utility, safety, and nighttime attractiveness while minimizing:

1. Light escaping directly from fixtures or indirectly after reflection from surfaces into the atmosphere which causes increased artificial sky brightness;
2. Glare arising directly from fixtures or from over-illuminated outdoor areas which interferes with effective vision;
3. Energy waste which increases impacts on the environment through energy production byproducts;
4. Light trespass across property lines; and
5. Potential disruption to nocturnal ecosystems including human health.

Chapter 20.410 Regulation of Cannabis Activities

Sections 20.410.004 (Indoor Commercial Cannabis Cultivation), 20.410.005 (Commercial Cannabis Manufacturing), and 20.410.006 (Cannabis Testing Operations) require that operators install and maintain, in good working-order, air treatment or other ventilation systems to prevent odors generated from the cultivation of cannabis from being detected within 10 feet of the structure in which commercial cannabis cultivation occurs.

Chapter 20.480 Design Review

Section 20.480.002 (Applicability) requires design review for all projects that require a building permit that involve construction, reconstruction, rehabilitation, alteration, or other improvements to the exterior of a structure or parking area, except for projects developed in compliance with a previous design review approval.

Section 20.480.003 (Assignment of Design Review Responsibilities) states that the Planning Commission has design review authority for all projects requiring Planning Commission approval and all new commercial, downtown, employment, mixed-use, office, and multi-family developments. The Planning Commission shall also consider the Design Review Board's recommendations and shall approve, conditionally approve, or deny the design review application.

Section 20.480.006 (Design Review Criteria) states that when conducting design review, the Design Review Board, Chief Planner, Planning Commission, or City Council shall evaluate applications to ensure that they conform to the policies of the General Plan and any applicable specific plan, are consistent with any other policies or guidelines the City Council may adopt, and satisfy specific criteria outlined in this code, such as those related to a building, structure or signage; parking areas; open space, and pedestrian areas; and electrical and mechanical equipment or works, among other criteria. Ultimately, the code states that a project's design features are reviewed in consideration of achieving a safe, efficient, and harmonious development, and shadow patterns, and that components considered in design review shall include safety.

Section 20.480.010 (Appeals; Expiration, Extensions, and Modifications) states a decision made by the Chief Planner on a project shall be subject to review by the Planning Commission either on appeal by the applicant or upon motion of the Planning Commission. If the Planning Commission fails to make an order to review the Chief Planner's determination at its next regular meeting after the determination, then the Chief Planner's determination shall be final. In addition, for expirations, extension, and modifications, design review approval is effective and may only be extended or modified as detailed in Chapter 20.450, Common Procedures.

3.2.6 - Methodology

Impacts related to air quality resulting from implementation (construction and operation) of the proposed project (collectively, the General Plan Update, Zoning Code Amendments, and CAP) are discussed below. The impact analysis is based on air quality modeling of the criteria air pollutant and ozone precursor emissions that would result from projected future growth at buildout of the proposed project. To determine the increase in air quality emissions as a result of the proposed project, the total net residential, commercial, and industrial land uses that could be developed with

implementation of the proposed project were estimated by calculating the net change from Existing Conditions (which is based on 2019 VMT data from Fehr & Peers and 2022 Existing Conditions for nonresidential square footage and residential unit count) and buildout of the proposed project in 2040. The 2019 VMT and 2022 land use existing conditions represent the environmental baseline from which impacts caused by the proposed project are assessed.

CalEEMod Version 2020.4.0 was used to calculate emissions of air pollutants associated with buildout of the proposed project (see Appendix B). Nonresidential space from the Mixed-Use area is conservatively estimated to be 50 percent residential and 50 percent nonresidential space. Please refer to Table 2-1 in Chapter 2, Project Description, Section 2.3.3, Existing Uses, for the existing uses used in the existing emissions modeling and Table 2-2 in Chapter 2, Project Description, Section 2.5.1, General Plan Update Land Use Map, for the proposed land uses used in the proposed project emissions modeling and the modeling output files in Appendix B for detailed modeling results. It should be noted, however, that the emissions modeling was not used in this analysis for determining impact significance. Impact significance was instead determined by employing qualitative analysis methodology recommended by the BAAQMD, as discussed in greater detail below.

3.2.7 - Thresholds of Significance

BAAQMD Significance Criteria

As described in the Regulatory Framework section, the BAAQMD CEQA Air Quality Guidelines contain instructions on how to evaluate, measure, and mitigate air quality impacts generated from land development construction and operation activities.[18] For purposes of this Draft Program EIR, the City of South San Francisco is using the BAAQMD's current criteria pollutant and ozone precursor significance thresholds from their 2017 CEQA Air Quality Guidelines to evaluate the proposed project's impacts in order to protectively evaluate the potential effects of the proposed project on air quality.

Clean Air Plan Consistency

Under its plan-level review criteria, which apply to long-range plans such as this General Plan Update and CAP, the BAAQMD requires a consistency evaluation of a plan with its current AQP control measures. The current AQP is the 2017 Bay Area Clean Air Plan. The BAAQMD considers the project consistent with the air quality management plan in accordance with the following, which are discussed under Impact AIR-1 below:

- Does the project support the primary goals of the AQP?
- Does the project include applicable control measures from the AQP?
- Does the project disrupt or hinder implementation of any AQP control measures?
- A comparison that the project VMT or vehicle trip increase is less than or equal to the projected population increase.

[18] Bay Area Air Quality Management District (BAAQMD). 2017. CEQA Air Quality Guidelines. Website: https://www.baaqmd.gov/~/media/files/planning-and research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed April 19, 2022.

Criteria Air Pollutants and Ozone Precursors

The BAAQMD has identified thresholds of significance for criteria air pollutant and ozone precursor emissions, including ROG, NO_X, PM_{10}, and $PM_{2.5}$. These significance thresholds are recommended by the BAAQMD as de minimis thresholds for individual development projects, meaning they represent a level of air pollutant emissions at which impacts to air quality become potentially significant and could contribute to a potential or existing violation of federal and State AAQS. Development projects below the significance thresholds are not expected to generate sufficient air pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected violation of federal or State AAQS.

According to the BAAQMD's CEQA Air Quality Guidelines, long-range plans (e.g., general plans) present unique challenges for assessing air quality impacts. Because of the SFBAAB's nonattainment status for ozone and particulate matter and the cumulative impacts of population and development growth on air quality, these plans usually have significant and unavoidable adverse air quality impacts. To meet the BAAQMD's recommended plan-level significance thresholds for operational criteria air pollutant and precursor impacts, a proposed plan must satisfy the following criteria:

- Consistency with current AQP control measures.
- A proposed plan's projected VMT or vehicle trips increase is less than or equal to its projected population increase.

Sensitive Receptor Exposure to Pollutant Concentrations

Local CO Hotspots

Congested intersections have the potential to create elevated concentrations of CO, referred to as CO hotspots. The significance criteria for CO hotspots are based on the California AAQS for CO, which are 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average). Under a plan-level review, the BAAQMD does not require an evaluation of CO hotspots.[19] With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology, the SFBAAB is in attainment of the California and National AAQS for CO emissions, and CO concentrations in the Air Basin have steadily declined.

Community Risk and Hazards

The BAAQMD's 2017 CEQA Air Quality Guidelines contain significance thresholds for plan-level analyses with respect to local community health risk and hazards resulting from receptor exposure to TAC emissions. The BAAQMD's significance thresholds for local community risk and hazard impacts apply to both the siting of a new TAC source and to the siting of a new sensitive receptor.

Consistent with BAAQMD guidance, a proposed plan would be considered to have less than significant impacts related to local community health risk and hazard if it contains a land use diagram that 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 another BAAQMD-approved modeled

[19] Bay Area Air Quality Management District (BAAQMD). 2017. California Environmental Quality Act Air Quality Guidelines. May. Website: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en&rev=0d2d971e661d41f28a56953f1776bdde. Accessed May 8, 2022.

distance) on each side of all freeways and high-volume roadways, and the proposed plan identifies goals, policies, and objectives to minimize potentially adverse impacts. Local community risk and hazard impacts are associated with TACs and $PM_{2.5}$ because emissions of these pollutants can have significant health impacts at the local level.

Odors

The BAAQMD's thresholds for odors are qualitative based on BAAQMD's Regulation 7, Odorous Substances. This rule places general limitations on odorous substances and specific emission limitations on certain odorous compounds. In addition, odors are also regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance, which states that no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property. Under BAAQMD's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance. The BAAQMD has established odor screening thresholds for land uses that have the potential to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants. For a plan-level analysis, BAAQMD requires:

- Potential existing and planned location of odors sources to be identified.
- Policies to reduce odors.

CEQA Appendix G Checklist Questions

According to CEQA Guidelines Appendix G Environmental Checklist, to determine whether impacts to air quality are significant environmental effects, the following questions are analyzed and evaluated.

> Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.
>
> Would the project:
>
> a) Conflict with or obstruct implementation of the applicable air quality plan?
>
> b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?
>
> c) Expose sensitive receptors to substantial pollutant concentrations?
>
> d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

3.2.8 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where appropriate.

Consistency with Air Quality Management Plan

Impact AIR-1: The proposed project would conflict with or obstruct implementation of the applicable air quality plan.

The current AQP applicable to the Planning Area is the 2017 Bay Area Clean Air Plan. According to the BAAQMD's guidance, a proposed land use plan would be consistent with the AQP if it would: (1) support the primary goals of the AQP, (2) include applicable control measures from the AQP, (3) not disrupt or hinder implementation of any AQP control measures, and (4) the plan's projected VMT increase must be less than or equal to its projected population growth.

(1) The Proposed Project Supports the Primary Goals of the AQP

The primary goals of the 2017 Bay Area Clean Air Plan are to attain air quality standards, reduce population exposure and protect public health, and reduce GHG emissions and protect the climate.

Attain Air Quality Standards

BAAQMD's 2017 Bay Area Clean Air Plan strategy is based on regional population and employment projections within the Bay Area compiled by ABAG.[20] Demographic trends incorporated into the Plan Bay Area determine VMT within the Bay Area, which BAAQMD utilizes to forecast future air quality trends. The SFBAAB is currently designated a nonattainment area for O_3, $PM_{2.5}$, and PM_{10} (State AAQS only).

The proposed project would be consistent with the 2017 Bay Area Clean Air Plan's primary goal of achieving and maintaining attainment status for AAQS as the land use patterns in the proposed project would not be substantially different from existing land use patterns. The City's primary approach to accommodating additional growth is to locate new housing and jobs in the East of 101, Lindenville, Downtown, and El Camino planning sub-areas (Chapter 2, Project Description, Exhibit 2-5), which are well served by Caltrain, BART, or SamTrans service and have good access to opportunity (such as jobs, neighborhood amenities, and health care facilities). Moreover, because South San Francisco is a fully built city, new development would primarily occur on parcels that contain existing homes or businesses. By encouraging residential and nonresidential development within already developed urban areas, the concentration of population, employment, and services allows for more mixed-use and would promote more efficient land use interaction and consequently reduce air quality impacts. Although the proposed project may result in other private and public improvements throughout the City (see Chapter 2, Project Description, Sections 2.5.2, 2.5.5, and 2.5.6), these improvements would occur within the urban fabric of the City and would not substantially alter existing land use patterns.

The South San Francisco Municipal Code contains rules and regulations related to air quality improvement. Chapter 8.69 (Affordable Housing Commercial Linkage Fees) promotes the reduction of traffic and related air quality impacts. Chapter 13.30 (Tree Preservation) preserves trees which counteract air pollution and oxygenate the air.

[20] Spare The Air – Cool The Climate, prepared by Bay Area Air Quality Management District. Website: https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en. Accessed May 5, 2022.

In addition to existing regulations in the Municipal Code, the proposed project includes several policies and actions related to improving air quality, as summarized under Section 3.2.5, Regulatory Framework. Policy CHEJ-3.1 of the General Plan Update requires the City to support regional efforts to improve air quality and protect human health. Action CHEJ-3.1.1 requires the City to work with the BAAQMD to establish and identify funding for air quality monitoring and reduction strategies. This action may include purchasing particulate matter ($PM_{2.5}$) monitors to track local air quality data in Lindenville, East of 101, and Downtown. Action CHEJ-3.2 would promote the reduction of mobile source pollution from diesel-based trucks and vehicles that travel to, from, or through South San Francisco. Action CHEJ-3.2.2 requires the City to establish a local ordinance that exceeds the State vehicle idling restrictions where appropriate, including restrictions for bus layovers, delivery vehicles, trucks at warehouses and distribution facilities and taxis, particularly when these activities take place near sensitive land uses (schools, healthcare facilities, affordable housing, and elder and childcare centers). Action CHEJ-3.2.2 also requires the City to manage truck idling in new residential neighborhoods in Lindenville and East of 101. Action CHEJ-3.3.2 encourages retrofitting of existing buildings to reduce indoor air pollution. Policy CEHJ-3.5 discourages sensitive uses near sources of pollution, in cases where this cannot be avoided, future projects would be required to implement additional design features to reduce potential indoor air pollution to future residents. Policy CR-6.1 supports resilient building design which also improves indoor air quality. Lastly, Policy CR-6.5 promotes a transportation system coordinated with air quality improvements.

The CAP includes several actions that assist in reducing or avoiding impacts related to air quality. Several of the CAP measures focus on reducing VMT and consequently mobile source emissions as well as promoting green building design which reduces indirect air quality associated with the building envelope. For example, Action CE 1.1, CE 1.3, and CE 1.6 all promote solar or renewable energy usage which would indirectly reduce air quality emissions. Additionally, Action TL 1.1, TL 2.2, and TL 2.6 promote the use of electric vehicles or a reduction in VMT which would result in a reduction in mobile source air quality emissions.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, include Section 20.300.008 (Lighting and Illumination) establishing regulations that allow outdoor lighting for uses and activities consistent with the need for utility, safety, and nighttime attractiveness while minimizing energy waste which increases impacts on the environment through energy production byproducts. Section 20.480 (Design Review) requires design review for all projects that require a building permit, assigns design review authority for all projects requiring Planning Commission approval, and provides the City with additional decision-making authority related to future development projects to assist in reducing or avoiding impacts related to air quality. Lastly, Section 20.300.010 (Performance Standards) establishes regulations related to air contaminants, requiring that uses, activities, and processes shall not operate in a manner that emit excessive dust, fumes, smoke, or particulate matter.

Lastly, as discussed in greater detail under Impact AIR-2, individual development projects would be required to undergo their own respective CEQA environmental review. In measuring whether an individual development project would be considered a project under CEQA that would have potentially significant impacts on local and regional air quality, including consideration of an individual development project's contribution to an existing or forecasted air quality violation, the

BAAQMD recommends significance thresholds for criteria pollutants and ozone precursors. Utilizing the BAAQMD's recommended significance thresholds and considering that the SFBAAB is currently in nonattainment for PM standards, individual development projects facilitated by the proposed project would be considered to have potentially significant site-specific or project-specific impacts related to the generation of fugitive dust during construction activities if they do not implement BMP targeting dust control and sediment migration. As the SFBAAB is currently designated as a nonattainment area for PM, and considering that the BAAQMD's recommended significance threshold for construction fugitive dust is binary—meaning if a project includes dust control BMPs then construction fugitive dust emissions would be less than significant but if a project does not explicitly include dust control BMPs then construction fugitive dust emissions would be potentially significant—MM AIR-1a would be required to ensure that individual development projects facilitated by the proposed project would result in less than significant construction fugitive dust impacts. MM AIR-1a contains BAAQMD's "Basic Construction Mitigation Measures Recommended for All Proposed Projects" in the bullet points listed below and contained in the BAAQMD's 2017 CEQA Air Quality Guidelines, which are recommended by the BAAQMD to ensure construction fugitive dust emissions are less than significant. As such, this impact would be less than significant with implementation of MM AIR-1a.

Reduce Population Exposure and Protect Public Health from Toxic Air Contaminants

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. Because South San Francisco is a fully built city, new development would primarily occur on parcels that contain existing homes or businesses, with the majority of potential growth occurring within the East of 101, Lindenville, Downtown, and El Camino planning sub-areas, which are well served by Caltrain, BART, or SamTrans service and have good access to opportunity (such as jobs, neighborhood amenities, and health care facilities). As such, the daily VMT per service population (employees + residents) is anticipated to be reduced from 27.42 VMT per service population for existing conditions to 26.80 VMT per service population for proposed project buildout conditions (see Section 3,14, Transportation.) The reduction in VMT per service population would reduce the population's exposure to TACs from transportation-related sources.

As identified in the discussion of community risk and hazards (see Impact AIR-3 below), new sensitive land uses could be proximate to sources of TACs, and new commercial land uses could generate an increase in TACs. However, as discussed in Impact AIR-3, mandatory compliance with BAAQMD regulations would ensure that new sources of TACs do not expose populations to significant health risk. Consistent with BAAQMD's CEQA Air Quality Guidelines, the proposed project would not result in a potentially significant community risk and hazard impact if the land use diagram identifies special overlay zones around existing and planned sources of TACs, including special overlay zones of at least 500 feet on each side of all freeways and high-volume roadways (or another BAAQMD-approved modeled distance), and the plan identifies goals, policies, and objectives to minimize potentially adverse impacts. For example, the ARB Air Quality and Land Use Handbook recommends avoiding the siting of new sensitive land uses (e.g., residences, schools) within:

- Within 300 feet of large gasoline fueling stations (with a throughput of more than 3.6 million gallons of gasoline per year);
- Within 300 feet of dry-cleaning operations;
- Within 500 feet of freeways, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day; and
- Within 1,000 feet of a major rail service or maintenance yard.

Because the proposed project does not currently contain a land use diagram which identifies special overlay zones around existing and planned sources of TACs, MM AIR-1b would be required to ensure that future development facilitated by the proposed project would result in less than significant impacts related to exposing sensitive receptors to substantial pollutant concentrations. As detailed below, MM AIR-1b would require future projects that may result in additional TACs that are located within 1,000 feet of a sensitive receptors(s) or would place sensitive receptors within 1,000 feet of uses generating TACs, such as roadways with volumes of 10,000 average annual daily trips or greater, to implement BAAQMD Guidelines and California Office of Environmental Health Hazard Assessment (OEHHA) policies and procedures requiring a Health Risk Assessments (HRA) for residential development and other sensitive receptors. Screening area distances may be increased on a case-by-case basis if an unusually large source or sources of hazardous emissions are proposed or currently exist. Based on the results of the HRA, that project would need to identify and implement measures (such as, but not limited to, air filtration systems) to reduce potential exposure to particulate matter, carbon monoxide, diesel fumes, and other potential health hazards. Measures identified in HRAs shall be included into the site development plan as a component of the project. MM AIR-1b would ensure that future development facilitated by the proposed project would result in less than significant impacts to sensitive receptors related to operational TACs.

MM AIR-1b, requiring an HRA for development projects generating TACs, would further ensure that populations are not exposed to significant health risk. Implementation of new and revised General Plan Update and CAP policies and programs would reduce community risk and hazards. Lastly, future development would be required to comply with Section 20.300.010 (Performance Standards) of the Zoning Ordinance, which requires that uses, activities, and processes shall not operate in a manner that emit excessive dust, fumes, smoke, or particulate matter. Therefore, with implementation of MM AIR-1b, the proposed project would be consistent with the applicable AQP's primary goal of reducing public health impacts and this impact would be less than significant with mitigation.

Reduce Greenhouse Gas Emissions

GHG emissions are discussed in greater detail in Section 3.7, Greenhouse Gas Emissions. As discussed therein, implementation of the proposed project would substantially contribute to the region's achievement of the 2030 Statewide GHG reduction goal and is forecasted to advance toward the 2050 Statewide goal. In addition, the proposed project is consistent with regional strategies for infill development identified by the MTC/ABAG in the Plan Bay Area. Consequently, the proposed project is consistent with the goals of the 2017 Bay Area Clean Air Plan to reduce GHG emissions. Accordingly, this impact would be less than significant.

(2) The Proposed Project Includes Applicable Control Measures From the AQP

The BAAQMD's 2017 Clean Air Plan contains 55 control measures aimed at reducing air pollution in the Bay Area. These include control measures addressing stationary, area, mobile source, and transportation emissions. They also include control measures designed to protect the climate and promote mixed use, compact development to reduce vehicle emissions and exposure to pollutants from stationary and mobile sources. BAAQMD encourages lead agencies to incorporate these measures into plan elements. As explained below, the proposed project includes the applicable control measures from the AQP.

Table 3.2-5 identifies the applicable control measures included in the 2017 Clean Air Plan and the General Plan Update and CAP policies and actions, as well as regulations in the South San Francisco Municipal Code and Zoning Ordinance related to the control measures. Control measures not included here would not pertain to the proposed project as a long-range land use planning document, such as Control Measure SS7, Sulfuric Acid Plants, which calls for the consideration of amending District Rule 9-1 to limit SO_2 emissions from acid plants associated with petroleum refining or Control Measure TR1, Clean Air Teleworking Initiative, which calls for the development of teleworking best practices for employers. Measures not included in Table 3.2-5 were determined by the City to not be applicable to the proposed project. Please refer to the BAAQMD's 2017 Clean Air Plan for more information on all 55 control measures. As shown in Table 3.2-5, the General Plan Update, South San Francisco Zoning Ordinance, CAP, and South San Francisco Municipal Code include policies, actions, and requirements that incorporate and implement the control measures included in the 2017 Clean Air Plan. As such, the proposed project would be consistent with the 2017 Clean Air Plan under this criterion. Therefore, this impact would be less than significant.

Table 3.2-5: Proposed Project Consistency With 2017 Clean Air Plan

2017 Clean Air Plan Control Measure	Consistent with Control Measure?	Discussion
TR2 (Trip Reduction Programs): Encourage trip reduction policies and programs in local plans, e.g., general and specific plans while providing grants to support trip reduction efforts. Encourage local governments to require mitigation of vehicle travel as part of new development approval, to adopt transit benefits ordinances in order to reduce transit costs to employees, and to develop innovative ways to encourage rideshare, transit, cycling, and walking for work trips.	Yes	The General Plan Update includes the following policies to reduce Vehicle Miles Traveled (VMT): **Policy LU-2.5:** Encourage shared parking in neighborhoods. Encourage shared parking and park once strategies to minimize parking demand and reduce vehicle trips. Locate parking behind commercial buildings. **Policy MOB-3.1:** Promote mode shift among employers. Manage the number of vehicle trips, with a focus on promoting mode shift among employers. **Policy MOB-3.2:** Optimize traffic operations on City streets. Optimize traffic operations on City streets while avoiding widening roadways or otherwise pursuing traffic operations changes at expense of multimodal safety, transit reliability, or bicycle and

2017 Clean Air Plan Control Measure	Consistent with Control Measure?	Discussion
		pedestrian comfort. **Policy MOB-4.1:** Increase substantially the proportion of travel using modes other than driving alone. **Policy MOB-4.2:** Embrace innovation. Prepare the City for changes to transportation technology (such as autonomous vehicles and micro-mobility) and incorporate such innovations into projects when appropriate and where feasible. The CAP includes the following action to reduce VMT: **Action TL 2.2:** Implement, monitor, and enforce compliance with the City's TDM Ordinance.
TR9 (Bicycle and Pedestrian Access Facilities): Encourage planning for bicycle and pedestrian facilities in local plans, e.g., general and specific plans, fund bike lanes, routes, paths and bicycle parking facilities.	Yes	The General Plan Update includes the following policies related to bicycle and pedestrian facilities: **Policy LU-2.3:** Develop connected transit-oriented communities. Develop strong pedestrian, shuttle, and bicycle connections to and/from transit via pedestrian-oriented building design, creating safe and convenient road crossings, and providing street furniture and amenities. **Policy LU-4.4:** Improve pedestrian and bicycle connectivity in residential neighborhoods. Link existing residential neighborhoods by providing convenient pedestrian and bicycle connections to nearby destinations, such as parks, public facilities, and shopping centers. **Policy LU-7.5:** Foster pedestrian and bicycle access in neighborhood commercial development. Require new commercial development to foster pedestrian and bicycle access by minimizing building setbacks from the sidewalk, providing safe, accessible pedestrian connections, and creating secure and convenient bike storage. **Policy LU-8.3:** Improve pedestrian connections and sidewalks. Improve pedestrian connections and sidewalk infrastructure across the City, especially between residential and commercial areas, keeping in mind mobility needs of children, families, seniors, and people with disabilities.

2017 Clean Air Plan Control Measure	Consistent with Control Measure?	Discussion
		The CAP includes the following action related to bicycle and pedestrian facilities: **Action TL 2.6:** Ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled. Develop a Capital Improvement Program (CIP) prioritization criteria, including equity considerations for SB 1000 neighborhoods, to strategically advance multimodal complete streets projects. All capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans.
EN2 (Decrease Electricity Demand): Work with local governments to adopt additional energy efficiency policies and programs. Support local government energy efficiency program via best practices, model ordinances, and technical support. Work with partners to develop messaging to decrease electricity demand during peak times.	Yes	The General Plan Update includes the following policies to decrease electricity demand: **Policy CP-3.1:** Building code maintenance for new and major renovations (energy efficiency). Regularly update South San Francisco's building codes to improve the energy performance of new construction and major remodels. **Policy CP-5.1:** Require minimum of LEED™ silver rating or equivalent for new buildings. Require all new municipal buildings and facilities to meet a minimum LEED™ silver rating as certified by the US Green Building Council or equivalent green building rating system. Require feasibility studies for zero-net-energy use, on-site renewable energy generation, and on-site batteries. **Policy CP-5.5:** Energy resilience of municipal buildings. Require municipal building and facility new construction and major renovation projects to evaluate the feasibility of incorporating on-site batteries that store electricity from on-site renewable energy generation to supply the building and community with electricity in the event of a disaster. The CAP includes the following actions to decrease electricity demand: **Action CE 1.1:** Adopt solar reach code for

2017 Clean Air Plan Control Measure	Consistent with Control Measure?	Discussion
		nonresidential buildings. Require the construction of any new nonresidential conditioned space of 5,000 square feet or more, or the conversion of unconditioned space 5,000 square feet or more, to meet a minimum of 50 percent of modeled building electricity needs with on-site renewable energy sources, as is feasible. To calculate 50 percent of building electricity needs for the new conditioned space, the applicant shall calculate building electricity use as part of the Title 24 compliance process. Total electricity use shall include total use for the new conditioned space excluding process energy. **Action CE 1.3:** Streamline PV system permitting and approval. Establish a streamlined PV system permitting and approval process to encourage the addition of solar PV systems. **Action CE 1.6:** Explore community scale solar and other renewable energy implementation. Explore the opportunities to install community scale solar PV or other renewable energy systems including biogas to support local energy resiliency and provide renewable energy to disadvantaged communities. **Action BNC 1.1:** Improve the energy efficiency of new construction. Provide a combination of financial and development process incentives (e.g., Expedited permitting, FAR increases, etc.) to encourage new development to exceed Title 24 energy efficiency standard. **Action BNC 1.2:** Adopt an all-electric reach code for nonresidential new construction. Implement residential all-electric reach code and adopt all-electric reach code for nonresidential new construction. Exempt occupancies must install electric building systems (e.g., space and water heating equipment) where feasible. Until the adoption of the nonresidential all-electric reach code, require any new nonresidential conditioned space of 5,000 square feet or more, or the conversion of unconditioned space 5,000 square feet or more to comply with CALGreen Tier 2 energy efficiency requirements to exceed mandatory energy efficiency requirements by 20 percent or more. For additions to existing development of 5,000 square feet or more, CALGreen Tier 2 shall be calculated as part of the Title 24 compliance process. Existing building space

2017 Clean Air Plan Control Measure	Consistent with Control Measure?	Discussion
		already permitted shall not be subject to CALGreen Tier 2 requirements. While the all-electric reach code would result in an increase in electricity consumption due to the preclusion of natural gas infrastructure and shifting that energy demand onto electricity, the requirement for new development and major renovations to incorporate Tier 2 CALGreen energy efficiency standards would contribute to a reduction in electricity consumption when compared with all-electric development that would not need to meet those CALGreen Tier 2 standards. The Zoning Ordinance includes the following regulation to reduce energy consumption: **Section 20.300.008** (Lighting and Illumination) establishes regulations that allow outdoor lighting for uses and activities consistent with the need for utility, safety, and nighttime attractiveness while minimizing energy waste which increases impacts on the environment through energy production byproducts.
BL4 (Urban Heat Island Mitigation): Develop and urge adoption of a model ordinance for "cool parking" that promotes the use of cool surface treatments for new parking facilities, as well existing surface lots undergoing resurfacing. Develop and promote adoption of model building code requirements for new construction or re-roofing/roofing upgrades for commercial and residential multi-family housing. Collaborate with expert partners to perform outreach to cities and counties to make them aware of cool roofing and cool paving techniques, and of new tools available.	Yes	The Municipal Code includes the following regulation to decrease urban heat islands: Chapter 15.26 of the Municipal Code adopts the 2019 California Energy Code, Title 24, Part 6 of the California Code of Regulations. Cool roofs became part of the requirements of the California Energy Code in October 2005.
NW2 (Urban Tree Planting): Develop or identify an existing model municipal tree planting ordinance and encourage local governments to adopt such an ordinance. Include tree planting recommendations the Air District's technical guidance, best	Yes	The General Plan Update and Municipal Code include the following policies and regulations to develop or identify an existing model municipal tree planting ordinance and encourage local governments to adopt such an ordinance: **Policy CP-7.2:** Expand tree canopy cover. Expand the canopy cover to increase environmental benefits,

2017 Clean Air Plan Control Measure	Consistent with Control Measure?	Discussion
practices for local plans and CEQA review.		prioritizing disadvantaged communities and connected wildlife corridors. **Policy ES-4.3:** Support the staged succession of tree planting. Plan in advance to remove and replant trees to guide tree planting priorities and help shape the character of the City. **Policy ES-4.4:** Plan for tree planting to promote tree health. Plan for trees before planting to promote the health and longevity of individual trees, reduce mortality/tree removals, and improve habitat for wildlife. Establish a design standard for minimum soil depth to facilitate robust tree growth. **Policy ES-5.5:** Plant using a multi-layered cluster to support wildlife. Design plantings in multi-layered clusters, placing groundcover, shrub, and tree canopy layers in the same area to support wildlife. **Chapter 13.30** of the Municipal Code provides standards and requirements for the protection of certain large trees and trees with unique characteristics; provides standards and requirements for planting and maintenance of trees for new development; and establishes recommended standards for planting and maintaining trees on property that is already developed.
WA3 (Green Waste Diversion): Develop model policies to facilitate local adoption of ordinances and programs to reduce the amount of green waste going to landfills.	Yes	The General Plan Update includes the following policy to reduce the amount of green waste going to landfills: **Policy CP-6.1:** Maintain and update Waste Reduction Plan. Maintain and regularly update the City's waste reduction plans and programs to ensure consistency with California's waste reduction goals.
WA4 (Recycling and Waste Reduction): Develop or identify and promote model ordinances on community-wide zero-waste goals and recycling of construction and demolition materials in commercial and public construction projects.	Yes	The General Plan Update includes the following policy to reduce the amount of construction and demolition materials: **Policy CP-5.4:** Require 75 percent waste diversion for municipal construction and demolition projects. Require municipal construction projects to achieve 75 percent waste diversion from the landfill. The CAP includes the following action to reduce the amount of waste:

2017 Clean Air Plan Control Measure	Consistent with Control Measure?	Discussion
		Action SW 1.1: Adopt a SB 1383 compliant zero-waste plan for municipal operations and the community that includes: mandatory residential and commercial recycling and collection of organics/food waste, mandatory commercial edible food recovery program (per MOU with San Mateo County Office of Sustainability), and updated trash enclosure space and access requirements based on hauler recommendations to accommodate all waste streams (e.g., recycling, trash, and organics). The Municipal Code contains the following regulation to support recycling and waste reduction: Chapter 15.60 of the Municipal Code promotes the redirection of recyclable materials generated during construction away from landfills. All project applicants are required to complete and submit a recycling management plan to estimate the volume of debris to be generated during construction and the estimated amount of debris that would be sent to the landfill.
WR2 (Support Water Conservation): Develop a list of best practices that reduce water consumption and increase on-site water recycling in new and existing buildings; incorporate into local planning guidance.	Yes	The General Plan Update includes the following policies related to water conservation: Policy ES-5.8: Design irrigation systems for water conservation. Install weather- or soil moisture-based irrigation controllers in all new development. Cluster plants together with similar water requirements to conserve water. Use the Water Use Classification of Landscape Species (WUCOLS) ratings to establish watering needs. Policy SA-28.5: Require sustainable and environmentally sensitive design. Incorporate sustainable and environmentally sensitive design and equipment, energy conservation features, water conservation measures and drought-tolerant or equivalent landscaping, and sustainable stormwater management features. The CAP includes the following actions related to water conservation: Action WW 1.1: Landscaping Water Requirements. Achieve greater water use reductions than WELO by requiring all landscapes to obtain a landscape permit, decreasing the size threshold to capture all landscape renovations, adding prescriptive irrigation plant lists,

2017 Clean Air Plan Control Measure	Consistent with Control Measure?	Discussion
		or water budget requirements. Action WW 2.1: Indoor Water Efficiency Standards. Require high-efficiency fixtures in all new construction and major renovations, comparable to CALGreen Tier 1 or 2 standards. The Municipal Code and Zoning Ordinance contain the following regulations to support water conservation: Section 14.04.134 (Low Impact Development [LID] requirements) states that all regulated projects shall implement LID requirements as specified in National Pollutant Discharge Elimination System (NPDES) Permit No. CAS612008 to reduce runoff and mimic a site's predevelopment hydrology. Section 20.300.007 (Landscaping) includes a number of requirements for new construction or rehabilitated landscapes to aid in energy conservation by providing shade from the sun and shelter from the wind and encourage the conservation of water resources through the use of native and drought-tolerant plans and water-conserving irrigation practices.
Source: Bay Area Air Quality Management District (BAAQMD). 2017. Spare the Air Cool the Climate, Final 2017 Clean Air Plan. Website: https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en. Accessed May 7, 2022.		

As shown in Table 3.2-5, the General Plan Update, South San Francisco Zoning Ordinance, CAP, and South San Francisco Municipal Code include policies, actions, and requirements that incorporate and implement the control measures included in the 2017 Clean Air Plan. As such, the proposed project would be consistent with the 2017 Clean Air Plan under this criterion. Therefore, this impact would be less than significant.

(3) The Proposed Project Would Not Disrupt or Hinder Implementation of Any AQP Control Measures

As described above and shown in Table 3.2-5, the General Plan Update and South San Francisco Municipal Code incorporate and are consistent with the control measures included in the 2017 Clean Air Plan. The proposed project does not include any components that would disrupt or hinder implementation of any control measures, such as precluding an extension of a planned transit line or bike bath or proposing excessive parking. As previously discussed, control measures not included above would not pertain to the proposed project as a long-range land use planning document, such as Control Measure SS7, Sulfuric Acid Plants, which calls for the consideration of amending District Rule 9-1 to limit SO_2 emissions from acid plants associated with petroleum refining or Control

Measure TR1, Clean Air Teleworking Initiative, that calls for the development of teleworking best practices for employers. Measures not included in Table 3.2-5 were determined by the City to not be applicable to the proposed project. Please refer to the BAAQMD's 2017 Clean Air Plan for more information on all 55 control measures. As such, the proposed project would not hinder the BAAQMD from implementing the control measures in the 2017 Clean Air Plan, and this impact would be less than significant.

(4) The Proposed Project Would Not Reduce VMT Per Capita

As previously discussed, one of the criteria for determining project consistency with the 2017 Clean Air Plan is comparing the Planning Area's VMT growth with population growth. The increase in daily VMT from implementation of the proposed project has been analyzed in Section 3.14, Transportation, which found that the total daily VMT would increase from the existing (year 2019) 3,387,200 VMT to 6,585,400 VMT in 2040 with buildout of the proposed project, resulting in a net increase of 3,198,200 daily VMT.

As discussed in Section 3.14, Transportation, the City's population would grow from an estimated 67,200 people under existing conditions to an estimated 108,100 people in 2040 with buildout of the proposed project. As such, the proposed project would facilitate an estimated population growth of 40,900 people by 2040. The estimated VMT and population growth from 2019 to 2040 are both shown below in Table 3.2-6.

The VMT growth facilitated by the proposed project would constitute an approximately 94 percent growth through 2040 while population growth facilitated by the proposed project would constitute an approximately 61 percent growth through 2040. The forecasted VMT growth would outpace the forecasted population growth facilitated by the proposed project. Therefore, the proposed project would be considered inconsistent with the 2017 Clean Air Plan. The proposed project would implement MM TRANS-1, which would require the City to implement its Transportation Demand Management (TDM) Ordinance as part of the Zoning Code Amendments and parking requirements to reduce project-generated VMT. MM TRANS-1 also requires the City to update its TDM Ordinance and parking requirements every 5 to 10 years and establish an East of 101 Area Trip Cap, to achieve the maximum feasible reductions in vehicle travel. However, even with the implementation of the General Plan Update policies and actions and implementation of MM TRANS-1, because the effectiveness of VMT reduction strategies cannot be quantified in this programmatic analysis, the City of South San Francisco may not achieve the overall VMT threshold reduction level. As such, this impact would be significant and unavoidable.

Table 3.2-6: Proposed Project VMT and Population Growth

Year	Annual VMT	Population
Existing 2019	3,387,200	67,200
Buildout 2040	6,585,400	108,100
Percent Increase	94.42%	60.86%
Notes: VMT = Vehicle Miles Traveled		

In conclusion, overall development facilitated by the proposed project would be inconsistent with the 2017 Clean Air Plan, since it would facilitate VMT growth which outpaces the forecasted population growth. Nonetheless, the proposed project would support the primary goals of the AQP, include applicable control measures from the AQP, and neither disrupt nor hinder implementation of any AQP control measures. Because the proposed project would facilitate VMT growth which outpaces forecasted population growth through 2040, the proposed project would conflict with the 2017 Clean Air Plan and impacts would be significant and unavoidable after mitigation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM AIR-1a Individual development projects facilitated by the proposed project shall incorporate the following Basic Construction Mitigation Measures recommended by the Bay Area Air Quality Management District (BAAQMD):

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure [ATCM] Title 13, Section 2485 of the California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Prior to the commencement of construction activities, individual project proponents shall post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.

MM AIR-1b Projects that may result in additional toxic air contaminants (TACs) that are located within 1,000 feet of a sensitive receptors(s) or would place sensitive receptors within 1,000 feet of uses generating TACs, such as roadways with volumes of 10,000

average annual daily trips or greater, shall implement Bay Area Air Quality Management District (BAAQMD) Guidelines and California Office of Environmental Health Hazard Assessment (OEHHA) policies and procedures requiring a Health Risk Assessments (HRA) for residential development and other sensitive receptors. Screening area distances may be increased on a case-by-case basis if an unusually large source or sources of hazardous emissions are proposed or currently exist. Based on the results of the HRA, identify and implement measures (such as air filtration systems) to reduce potential exposure to particulate matter, carbon monoxide, diesel fumes, and other potential health hazards. Measures identified in HRAs shall be included into the site development plan as a component of a proposed project.

MM TRANS-1 Transportation Demand Management

To reduce Vehicle Miles Traveled (VMT), the City shall implement its Transportation Demand Management (TDM) Ordinance as part of the Zoning Code Amendments and parking requirements. The City shall also update its TDM Ordinance and parking requirements every five to ten years and establish an East of 101 Area Trip Cap, to achieve the maximum feasible reductions in vehicle travel. The City shall achieve the performance standards outlined in the TDM Ordinance.

The City shall update its TDM Ordinance every 5 to 10 years to limit Total VMT and Work-Based VMT by incentivizing use of transit and active transportation and disincentivizing auto use. The TDM Ordinance shall cover all development projects generating greater than 100 daily trips, with the most stringent requirements for office/Research and Development (R&D) land uses that disproportionately account for the highest rates of VMT in the City. Development projects shall implement a combination of TDM programs, services, and infrastructure improvements, including but not limited to: establishing trip reduction programs; subsidizing transit and active transportation use; coordinating carpooling and vanpooling; encouraging telecommuting and flexible work schedules; designing site plans to prioritize pedestrian, bicycle, and transit travel; funding first/last mile shuttle services; establishing site-specific trip caps; managing parking supply; and constructing transit and active transportation capital improvements. Developments shall be subject to annual monitoring. The City shall establish an administrative fine structure for developments found to be out of compliance and apply any revenues from fines to infrastructure and services aimed at reducing VMT.

The City shall establish an East of 101 Area Trip Cap to support the monitoring of vehicle trip activity and focus efforts to reduce VMT. The area-wide trip cap shall apply to the high density employment uses in the East of 101 Area. The City shall conduct annual traffic counts along the cordon area perimeter. Should the trip cap be reached, the City shall consider corrective actions such as: revising mode share targets for projects subject to the TDM Ordinance, identifying new funding measures for TDM services, implementing new vehicle user charges, creating new

street connections, or slowing the pace of development approvals within the cordon zone.

The City shall update its parking requirements every 5 to 10 years to align with its TDM Ordinance and East of 101 Area Trip Cap. The City shall establish parking maximums for office/R&D uses to ensure that VMT reduction goals are incorporated into the design of development projects.

Level of Significance After Mitigation

Significant and unavoidable.

Criteria Air Pollutants and Ozone Precursors

Impact AIR-2:	**The proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard.**

Construction

The proposed project would not directly result in construction of any development or infrastructure; however, future development supported by the proposed project would result in short-term construction-related criteria pollutant emissions that have the potential to have an adverse effect on air quality. Short-term criteria pollutant emissions would occur during demolition, site preparation, grading, building construction, paving, and architectural coating activities associated with individual development projects. ROG and NO_X emissions are primarily associated with gasoline and diesel equipment exhaust and the application of architectural coatings. Fugitive dust emissions (PM_{10} and $PM_{2.5}$) are primarily associated with site preparation and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and VMT by construction vehicles on- and off-site. Typical construction equipment associated with development and redevelopment projects includes dozers, graders, excavators, loaders, and trucks.

Although the exact coverage, location, or duration of future construction projects is unknown at the time of preparation of this Draft Program EIR, future development activities would generally entail demolition, site preparation, grading, building construction, paving, and painting. Since South San Francisco is generally a built-out city, many new projects in the City will likely require the demolition of existing structures to make room for newer ones. In addition, the proposed project may result in other private and public improvements throughout the City (see Chapter 2, Project Description, Sections 2.5.2, 2.5.5, and 2.5.6). Fugitive dust emissions would typically be greatest during building demolition, site preparation, and grading due to the disturbance of soils and transport of material. NO_X emissions would also result from the combustion of diesel fuels used to power off-road heavy-duty vehicles and equipment (e.g., backhoes, bulldozers, excavators). The types and quantity of equipment, as well as duration of construction activities, would be dependent on project-specific conditions. Larger projects would require more equipment over a longer timeframe than that required for redevelopment of a single, residential home or small residential or mixed-use project.

As discussed in Section 3.2.7, Thresholds of Significance, the BAAQMD does not require plan-level thresholds of significance for construction emissions; however, the BAAQMD does maintain and

recommend project-level thresholds that potential future development projects would be subject to. In addition, the BAAQMD's CEQA Air Quality Guidelines identify and recommend a series of "Basic" measures to control and reduce construction-related emissions. For all projects, the BAAQMD recommends implementation of eight Basic Construction Measures[21] to reduce construction fugitive dust emissions. The BAAQMD determines a less than significant impact with respect to construction fugitive dust emissions if the following Basic Construction Measures are provided below:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California ATCM Title 13, Section 2485 of the California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.

As discussed in Section 3.2.7, Thresholds of Significance, a criterion identified by the BAAQMD for determining plan-level significance with respect to criteria air pollutants and ozone precursors is determining project consistency with the current AQP control measures, which are intended to ensure the region's achievement and maintenance of attainment of federal and State AAQS. As the SFBAAB is currently designated as a nonattainment area for PM, and considering that the BAAQMD's recommended significance threshold for construction fugitive dust is binary—meaning if a project includes dust control BMPs then construction fugitive dust emissions would be less than significant but if a project does not explicitly include dust control BMPs then construction fugitive dust emissions would be potentially significant—MM AIR-1a would be required to ensure that individual development projects facilitated by the proposed project would result in less than significant

[21] Bay Area Air Quality Management District (BAAQMD). 2017. California Environmental Quality Act Air Quality Guidelines. Website: https://www.baaqmd.gov/~/media/files/planning-and research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed April 19, 2022.

construction fugitive dust impacts. MM AIR-1a contains BAAQMD's "Basic Construction Mitigation Measures Recommended for All Proposed Projects" in the bullet points listed above and contained in the BAAQMD's 2017 CEQA Air Quality Guidelines, which are recommended by the BAAQMD to ensure construction fugitive dust emissions are less than significant. As such, this impact would be less than significant with implementation of MM AIR-1a.

Operation

The proposed project would accommodate new residential and nonresidential development that will operate through the General Plan Update horizon year 2040. Long-term criteria pollutant emissions would result from the operation of residential, retail, light industrial, commercial, and institutional uses supported by the proposed project. Operational air quality emissions are principally generated from area, energy, and mobile sources. Area source emissions are the combination of many small emission sources that include use of outdoor landscape maintenance equipment, use of consumer products such as cleaning products, use of fireplaces and hearths, and periodic reapplication of architectural coatings. Criteria pollutants generated from energy sources are principally from the on-site use of natural gas; electricity consumption is not included in energy source emissions as those potential emissions would be generated as the result of the operation of an electricity generation facility which may or may not be within the same air basin and under the same attainment status as the end-use. Mobile source emissions result from the vehicle activity associated with the operation of a given land use development project, including resident, worker, and patron vehicle trips.

Implementation of the proposed project may result in development of up to 17,153 net new residential units (based on 2019 baseline data from Fehr & Peers), and up to 14,100,523 square feet of net new nonresidential space[22] (Chapter 2, Project Description, Table 2-7). It should be noted that the proposed project would not itself authorize specific development to occur within the City. Future development projects would be subject to the City's standard CEQA review process and would be required to assess project-specific emissions in relation to the BAAQMD significance thresholds, which may result in additional mitigation measures to reduce any potential impacts that could occur. Although specific project-level information for potential future development is not available at this time and the estimation of emissions resulting from future development would be speculative, CalEEMod was utilized to provide an estimate of the potential overall area, energy, and mobile source emissions resulting from the proposed project for informational purposes only (i.e., not for the purpose of determining significance of potential air quality impacts).

The total net increase of residential, commercial, and industrial land uses that could be developed with implementation of the proposed project was calculated by estimating the net change from existing conditions and proposed project buildout (2040) by entering both into CalEEMod to determine area and energy source emissions. Emissions from mobile sources were calculated by using the ARB's Emission Factor Model (EMFAC 2021) based on VMT data by vehicle speed provided

[22] Nonresidential space from the Mixed-Use area is conservatively estimated to be 50 percent residential and 50 percent nonresidential space.

by Fehr & Peers. The net criteria air pollutants resulting from the proposed project are shown in Table 3.2-7.[23] CalEEMod output files are included as Appendix B of this Draft Program EIR.

Table 3.2-7: Net Operational Emissions

Category	Criteria Air Pollutants (Pounds/Day)			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Area	529.78	135.65	17.87	17.87
Energy	11.60	102.23	8.01	8.01
Transportation	-243.54	-1,517.15	2,216.62	445.87
Total pounds per day	297.84	-1,279.27	2,242.5	471.75
Total tons per year	54.36	-233.47	409.26	86.09

Notes:
NO_X = oxides of nitrogen
PM_{10} = particulate matter, including dust, 10 micrometers or less in diameter
$PM_{2.5}$ = particulate matter, including dust, 2.5 micrometers or less in diameter
ROG = reactive organic gas
Source: CalEEMod Version 2020.4.0 and EMFAC 2021 (see Appendix B).

As displayed in Table 3.2-7, overall area and energy source emissions would increase from baseline conditions as a result of the projected increase in residential units and nonresidential space. As previously discussed, area source emissions are the combination of many small emission sources that include use of outdoor landscape maintenance equipment, use of consumer products such as cleaning products, use of fireplaces and hearths, and periodic reapplication of architectural coatings. Criteria pollutants generated from energy sources are principally from the on-site use of natural gas for space and water heating; electricity consumption is not included in energy source emissions as those potential emissions would be generated as the result of the operation of an electricity generation facility which may or may not be within the same air basin and under the same attainment status as the end-use.

Also highlighted in Table 3.2-7, overall mobile source emissions would decrease from baseline emissions. Mobile source emissions result from the vehicle activity associated with the operation of a given land use development project, including resident, worker, and patron vehicle trips. Mobile source emissions would decrease from baseline conditions largely as a result of improved fuel efficiency standards, the accelerated adoption of EVs, and fleet turnover requirements implemented at the State level through 2040 as compared to existing conditions. Nonetheless, as previously mentioned, the emissions estimates contained in Table 3.2-7 provide a picture of the potential overall area, energy, and mobile source emissions resulting from the proposed project for informational purposes only and are not utilized in this analysis for the purpose of determining significance of potential air quality impacts.

[23] The modeled square footage for existing and proposed project conditions is based on Section 2, Table 2-7. The mobile emissions estimates are based on VMT data provided by Fehr & Peers for existing (2019) and proposed project (2040) conditions.

Consistency with AQP Control Measures

As previously mentioned, the BAAQMD's plan-level guidance does not require an emissions inventory of criteria air pollutants for plan-level analysis; however, the BAAQMD recommends that one criterion used for determining plan-level impact significance is to analyze the proposed plan's consistency with the current AQP control measures. As discussed in Impact AIR-1, the proposed project would be consistent with the applicable 2017 Clean Air Plan control measures, as illustrated in Table 3.2-5. As such, the proposed project would be consistent with the current AQP control measures, and this impact would be less than significant.

Proposed Plan VMT and Population Growth

As previously mentioned, the BAAQMD's plan-level guidance does not require an emissions inventory of criteria air pollutants for plan-level analysis; however, the BAAQMD recommends that the second criterion used for determining plan-level impact significance is to analyze the proposed plan's projected VMT growth versus its projected population growth from existing conditions through its planning horizon year (2040). If a proposed plan's projected VMT growth outpaces its projected population growth, then that proposed plan would result in a cumulatively considerable net increase in criteria pollutants, and this impact would be potentially significant. As discussed in Impact AIR-1, the VMT growth facilitated by the proposed project would constitute an approximately 94 percent growth through 2040 while population growth facilitated by the proposed project would constitute an approximately 61 percent growth through 2040. Therefore, the forecasted VMT growth would outpace the forecasted population growth facilitated by the proposed project. As such, this impact would be potentially significant. As described in Impact AIR-1, there is no reasonable mitigation that could be implemented to increase population projections while keeping VMT growth to a minimum in an area that is already fully urbanized and built out, such as the City of South San Francisco, this impact would remain significant and unavoidable after mitigation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM AIR- 1a and MM TRANS-1.

Level of Significance After Mitigation

Significant and unavoidable impact.

Sensitive Receptors Exposure to Pollutant Concentrations

Impact AIR-3:	**The proposed project would not expose sensitive receptors to substantial pollutant concentrations.**

Within the SFBAAB, localized risks are primarily associated with exposure to TAC emissions. As discussed in Section 3.2.3, Air Pollutants of Concern, TACs are a defined set of airborne pollutants that may pose a present or potential hazard to human health. Common sources of TAC emissions are stationary sources (e.g., dry cleaners, diesel backup generators, and gasoline stations), which are subject to BAAQMD permit requirements. Another common and often more significant source type

is on-road motor vehicles on high-volume roads, such as US-101, I-280, State Route (SR) 82, SR-35, and off-road sources such as construction equipment and diesel-powered trains traveling on the Caltrain corridor. Although the proposed project does not include specific plans for any new, large stationary sources of emissions, it could result in new sensitive receptors (primarily residential receptors) near existing sources of emissions.

Community Risk and Hazards–Plan Land Use Diagram Special Overlay Zones

While TACs could be generated during construction activities, the proposed project is a General Plan Update, CAP Update, and Zoning Code Amendment and would not directly result in construction of any development project. Identification of potential impacts to sensitive receptors resulting from construction-generated TACs would require project-specific information for future individual land use development projects that is not currently known. Therefore, consistent with BAAQMD's CEQA Air Quality Guidelines for analyzing plan-level impacts to sensitive receptors, the proposed project would not result in a potentially significant community risk and hazard impact if the land use diagram identifies special overlay zones around existing and planned sources of TACs, including special overlay zones of at least 500 feet on each side of all freeways and high-volume roadways (or another BAAQMD-approved modeled distance), and the plan identifies goals, policies, and objectives to minimize potentially adverse impacts. For example, the ARB Air Quality and Land Use Handbook recommends avoiding the siting of new sensitive land uses (e.g., residences, schools) within:

- Within 300 feet of large gasoline fueling stations (with a throughput of more than 3.6 million gallons of gasoline per year);
- Within 300 feet of dry-cleaning operations;
- Within 500 feet of freeways, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day; and
- Within 1,000 feet of a major rail service or maintenance yard.

Because the proposed project does not currently contain a land use diagram which identifies special overlay zones around existing and planned sources of TACs, MM AIR-1b would be required to ensure that future development facilitated by the proposed project would result in less than significant impacts related to exposing sensitive receptors to substantial pollutant concentrations. As detailed above, MM AIR-1b would require future projects that may result in additional TACs that are located within 1,000 feet of a sensitive receptors(s) or would place sensitive receptors within 1,000 feet of uses generating TACs, such as roadways with volumes of 10,000 average annual daily trips or greater, to implement BAAQMD Guidelines and OEHHA policies and procedures requiring an HRA for residential development and other sensitive receptors. Screening area distances may be increased on a case-by-case basis if an unusually large source or sources of hazardous emissions are proposed or currently exist. Based on the results of the HRA, that project would need to identify and implement measures (such as, but not limited to, air filtration systems) to reduce potential exposure to particulate matter, carbon monoxide, diesel fumes, and other potential health hazards. Measures identified in HRAs shall be included into the site development plan as a component of the project.

MM AIR-1b would ensure that future development facilitated by the proposed project would result in less than significant impacts to sensitive receptors related to operational TACs.

Community Risk and Hazards–Goals, Policies, and Objectives for Reducing Impacts

As discussed in Section 3.2.7, Thresholds of Significance, a proposed plan must also identify goals, policies, and objectives to minimize potential impacts and create overlay zones around sources of TACs, $PM_{2.5}$, and hazards to be considered to result in less than significant impacts related to exposing sensitive receptors to substantial pollutant concentrations. As discussed in Section 3.2.5, Regulatory Framework, the General Plan Update contains several policies and actions that aim to reduce the potential growth of vehicle use through encouraging the use of alternative modes of transportation, monitoring and improving existing sources of TACs throughout the City and reducing overall health impacts related to air quality in general.

General Plan Update policies and actions that target the use of alternative modes of transportation, such as bicycling, walking, or using public transit, include Action LU-1.1.3, Policy LU-2.1, Action LU-2.1.2, Policy LU-4.4, and Policy CR-6.5. General Plan Update policies and actions that require the City to monitor and improve existing source of TACs include Policy PE-2.1, Action CHEJ-3.1.1, Action CHEJ-3.2, Action CHEJ-3.2.1, Policy CHEJ-3.2.2, Policy CHEJ-3.3, and Action CHEJ-3.3.1. Lastly, General Plan Update policies and actions that generally aim to reduce health impacts to residents in the City include Policy SA-17.4, Policy SA-32.5, Policy CHEJ-3.1, Action CHEJ-3.3.2, Policy CHEJ-3.5, and Policy CHEJ-3.6.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, include Section 20.300.010 (Performance Standards), which establishes regulations related to air contaminants. Section 20.300.010 requires that sources of air pollution comply with rules identified by the EPA (Code of Federal Regulations, Title 40), the ARB, and the BAAQMD. The section further requires that operators of activities, processes, or uses that require “approval to operate” from the BAAQMD, shall file a copy of the permit with the Planning Division within 30 days of permit approval.

Considering the policies and actions of the General Plan Update and regulations in the Zoning Ordinance that target various strategies for reducing human health impacts and exposing sensitive receptors to substantial pollutant concentrations, as well as the implementation of MM AIR-1b, which requires an HRA for development projects generating TACs, this impact would be less than significant with mitigation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM AIR-1b.

Level of Significance After Mitigation

Less than significant impact.

Odors Exposure

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

While odors could be generated during construction activities, the proposed project is a General Plan Update, CAP Update, and Zoning Code Amendment and would not directly result in construction of any development project. Identification of potential impacts to odor receptors resulting from construction-generated odors, such as equipment exhaust, would require project-specific information for future individual land use development projects that is not currently known. As discussed in Section 3.2.7, Thresholds of Significance, consistent with the BAAQMD's CEQA Air Quality Guidelines, a plan-level analysis must acknowledge odor sources within the Planning Area and identify policies, goals, and objectives aimed at reducing potential odor impacts to ensure that potential impacts would be less than significant.

According to the BAAQMD's 2017 CEQA Air Quality Guidelines, land uses associated with odor complaints typically include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations such as chemical and other manufacturing. While odors do not present a health risk of themselves, they are often considered a nuisance by people who live, work, or otherwise are located near outdoor odor sources. The BAAQMD's CEQA Air Quality Guidelines identify a screening distance for 1 and 2 miles for the most common odor-generating land uses. Projects located outside of these screening distances would be presumed to not be exposed to odors, while projects within these screening distances present a potential to be exposed to odors.

The City of South San Francisco contains several of the land uses listed by the BAAQMD as potential odor sources, such as the Linden Stormwater Pump Station 6, South San Francisco–San Bruno Water Quality Control Plant, and various coffee shops that all have the potential to roast coffee beans on-site. As South San Francisco is a fully urbanized and built-out city, it currently has, and the proposed project would facilitate future development of, sensitive receptors within the identified screening distances of existing odor sources.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, contain several provisions with the goal to protect and promote the public health, safety, peace, comfort, convenience, prosperity, and general welfare. Section 20.300.010 (Performance Standards) establishes regulations related to odors and restricts uses, processes, or activities that produce objectionable odors that are perceptible without instruments by a reasonable person at the lot lines of a site. Sections 20.410.004 (Indoor Commercial Cannabis Cultivation), 20.410.005 (Commercial Cannabis Manufacturing), and 20.410.006 (Cannabis Testing Operations) require that operators install and maintain, in good working-order, air treatment or other ventilation systems to prevent odors generated from the cultivation of cannabis from being detected within 10 feet of the structure in which commercial cannabis cultivation occurs. In addition, BAAQMD Regulation 7 limits emissions of odorous substances within the Air Basin and would apply to any odor source within the Planning Area. Therefore, compliance with the applicable regulations in the Zoning Ordinance as well applicable BAAQMD rules and regulations, would minimize odor emissions

from adversely affecting a substantial number of people within the City and impacts would be less than significant.

Level of Significance

Less than significant impact.

3.2.9 - Cumulative Impacts

The geographic scope of the cumulative impact analysis for air quality is the Air Basin. This analysis evaluates whether the impacts of the proposed project, together with the impacts of cumulative development, would result in a cumulatively significant impact with respect to air quality. This analysis then considers whether the incremental contribution of the impacts associated with the implementation of the proposed project would be significant. Both conditions must apply for a project's cumulative effects to rise to the level of significance.

2017 Clean Air Plan Consistency

To comply with this threshold, the BAAQMD CEQA Guidelines provide that land use plans should incorporate policies and requirements that ensure they do not inhibit attainment of air quality standards and that actually assist in improving local and regional air quality.

In particular, BAAQMD evaluates criteria pollutants resulting from long-range plans such as the proposed project, by evaluating consistency with the AQP, as well as a comparison of project VMT to projected population increase. As noted in Impact AIR-1 above, the development envisioned by the proposed project would be inconsistent with the 2017 Bay Area Clean Air Plan, since it would facilitate VMT growth which outpaces the forecasted population growth. Nonetheless, the proposed project would support the primary goals of the AQP, include applicable control measures from the AQP, and neither disrupt nor hinder implementation of any AQP control measures.

To reduce potential emissions impacts, BAAQMD further recommends that air quality related goals, policies, performance measures and standards should be incorporated within the context of the plan itself, rather than introduced as corrective actions within the plan's EIR. As shown in Table 3.2-5, the General Plan Update, South San Francisco Zoning Ordinance, CAP, and South San Francisco Municipal Code include policies, actions, and requirements that incorporate and implement the control measures included in the 2017 Clean Air Plan. Moreover, as discussed in Impact AIR-1, the proposed project would support the overall goals of the 2017 Clean Air Plan with implementation of MMs AIR-1a and AIR-1b.

As previously discussed, as the SFBAAB is currently designated as a nonattainment area for PM, and considering that the BAAQMD's recommended significance threshold for construction fugitive dust is binary—meaning if a project includes dust control BMPs then construction fugitive dust emissions would be less than significant but if a project does not explicitly include dust control BMPs then construction fugitive dust emissions would be potentially significant—MM AIR-1a would be required to ensure that individual development projects facilitated by the proposed project would result in less than significant construction fugitive dust impacts. MM AIR-1a contains BAAQMD's "Basic Construction Mitigation Measures Recommended for All Proposed Projects" in the bullet points

listed below and contained in the BAAQMD's 2017 CEQA Air Quality Guidelines, which are recommended by the BAAQMD to ensure construction fugitive dust emissions are less than significant. As such, impacts related to construction fugitive dust emissions would be less than significant with implementation of MM AIR-1a.

Consistent with BAAQMD's CEQA Air Quality Guidelines, the proposed project would not result in a potentially significant community risk and hazard impact if the land use diagram identifies special overlay zones around existing and planned sources of TACs, including special overlay zones of at least 500 feet on each side of all freeways and high-volume roadways (or another BAAQMD-approved modeled distance), and the plan identifies goals, policies, and objectives to minimize potentially adverse impacts. For example, the ARB Air Quality and Land Use Handbook recommends avoiding the siting of new sensitive land uses (e.g., residences, schools) within:

- Within 300 feet of large gasoline fueling stations (with a throughput of more than 3.6 million gallons of gasoline per year);
- Within 300 feet of dry-cleaning operations;
- Within 500 feet of freeways, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day; and
- Within 1,000 feet of a major rail service or maintenance yard.

Because the proposed project does not currently contain a land use diagram which identifies special overlay zones around existing and planned sources of TACs, MM AIR-1b would be required to ensure that future development facilitated by the proposed project would result in less than significant impacts related to exposing sensitive receptors to substantial pollutant concentrations. As detailed below, MM AIR-1b would require future projects that may result in additional TACs that are located within 1,000 feet of a sensitive receptors(s) or would place sensitive receptors within 1,000 feet of uses generating TACs, such as roadways with volumes of 10,000 average annual daily trips or greater, to implement BAAQMD Guidelines and OEHHA policies and procedures requiring an HRA for residential development and other sensitive receptors. Screening area distances may be increased on a case-by-case basis if an unusually large source or sources of hazardous emissions are proposed or currently exist. Based on the results of the HRA, that project would need to identify and implement measures (such as, but not limited to, air filtration systems) to reduce potential exposure to particulate matter, carbon monoxide, diesel fumes, and other potential health hazards. Measures identified in HRAs shall be included into the site development plan as a component of the project. MM AIR-1b would ensure that future development facilitated by the proposed project would result in less than significant impacts to sensitive receptors related to operational TACs.

Nonetheless, as the proposed project would facilitate VMT growth which outpaces projected population growth through the planning horizon of 2040, the proposed project would be inconsistent with the 2017 Clean Air Plan and would therefore result in a cumulatively considerable net increase in criteria air pollutants and ozone precursors, resulting in a conflict with the applicable air quality plan. This impact would be cumulatively considerable after implementation of MMs AIR-1a and AIR-1b.

Criteria Air Pollutant and Ozone Precursor Emissions

BAAQMD's plan-level guidelines do not require an emissions inventory of criteria air pollutants for plan-level projects; however, an inventory of criteria pollutants is provided in Impact AIR-2 for informational purposes only. As discussed in Section 3.2.7, Thresholds of Significance, a plan-level analysis must demonstrate project consistency with AQP control measures and a projected VMT increase that is less than or equal to its projected population growth for this impact to be less than significant.

As explained above, the development envisioned by the proposed project would be inconsistent with the 2017 Bay Area Clean Air Plan, since it would facilitate VMT growth which outpaces the forecasted population growth. Nonetheless, the proposed project would support the primary goals of the AQP, include applicable control measures from the AQP, and neither disrupt nor hinder implementation of any AQP control measures. The proposed project aims to facilitate balanced growth between housing and employment within the City, which would limit operational emissions through reducing residents' dependency on vehicular transportation. In addition, the General Plan Update and CAP contain new policies and actions to reduce criteria air pollutants to the maximum extent practicable.

All new development and redevelopment within the City would be required to meet the BAAQMD rules and regulations that include Regulation 6-3-306 that restrict the installation of wood burning fireplaces into a new building and Regulation 8-3-301 that limits the allowed VOC levels in the architectural coatings applied onto buildings within the City. The 2019 California Code of Regulations, Title 24, Part 6, standards also now require that all homes built in California to have zero-net-energy use, which is achieved through energy efficiency measures as well required rooftop solar photovoltaic systems. The 2019 California Code of Regulations, Title 24, Part 6, standards also apply to nonresidential buildings and require a variety of energy efficiency measures to be implemented that will reduce energy as usage as well as air emissions.

Therefore, compliance with the applicable policies and actions in the General Plan Update and CAP, as well applicable State and BAAQMD rules and regulations, would minimize the potential air quality impacts resulting from implementation of the proposed project, which would encourage or require the use of fuel-efficient equipment, vehicles, and BMPs. Mandatory compliance with design review regulations and policies in the South San Francisco Municipal Code and General Plan would ensure operation-related air quality impacts from new development under the General Plan would be less than significant on an individual project basis, and the City will review those future projects under its standard design review procedures in the Municipal Code.

As previously discussed, as the SFBAAB is currently designated as a nonattainment area for PM, and considering that the BAAQMD's recommended significance threshold for construction fugitive dust is binary—meaning if a project includes dust control BMPs then construction fugitive dust emissions would be less than significant but if a project does not explicitly include dust control BMPs then construction fugitive dust emissions would be potentially significant—MM AIR-1a would be required to ensure that individual development projects facilitated by the proposed project would result in less than significant construction fugitive dust impacts. MM AIR-1a contains BAAQMD's "Basic Construction Mitigation Measures Recommended for All Proposed Projects" in the bullet points

listed below and contained in the BAAQMD's 2017 CEQA Air Quality Guidelines, which are recommended by the BAAQMD to ensure construction fugitive dust emissions are less than significant. As such, impacts related to construction fugitive dust emissions would be less than significant with implementation of MM AIR-1a.

Nonetheless, as the proposed project would facilitate VMT growth which outpaces projected population growth through the planning horizon of 2040, the proposed project would be inconsistent with the 2017 Clean Air Plan and would therefore result in a cumulatively considerable net increase in criteria air pollutants and ozone precursors, resulting in a conflict with the applicable air quality plan. This impact would be cumulatively considerable after implementation of MMs AIR-1a and AIR-1b.

Sensitive Receptor Exposure to Substantial Pollutant Concentrations

As discussed under Impact AIR-3, localized risks are primarily associated with exposure to TAC emissions. Common sources of TAC emissions are stationary sources (e.g., dry cleaners, diesel backup generators, and gasoline stations), which are subject to BAAQMD permit requirements. Another common and often more significant source type is on-road motor vehicles on high-volume roads, such as US-101, I-280, SR-82, SR-35, and off-road sources such as construction equipment and diesel-powered trains traveling on the Caltrain corridor. Although the proposed project does not include specific plans for any new, large stationary sources of emissions, it could result in new sensitive receptors (primarily residential receptors) near existing sources of emissions.

Consistent with BAAQMD's CEQA Air Quality Guidelines, a long-range plan would not result in a potentially significant community risk and hazard impact if the land use diagram identifies special overlay zones around existing and planned sources of TACs, including special overlay zones of at least 500 feet on each side of all freeways and high-volume roadways, and the plan identifies goals, policies, and objectives to minimize potentially adverse impacts. Because the proposed project does not currently contain a land use diagram which identifies special overlay zones around existing and planned sources of TACs, this would be a potentially significant impact, consistent with the BAAQMD significance thresholds discussed under Impact AIR-3. Therefore, MM AIR-1b would be required to ensure that future development facilitated by the proposed project would result in less than significant impacts related to exposing sensitive receptors to substantial pollutant concentrations.

Consistent with BAAQMD's CEQA Air Quality Guidelines, the proposed project would not result in a potentially significant community risk and hazard impact if the land use diagram identifies special overlay zones around existing and planned sources of TACs, including special overlay zones of at least 500 feet on each side of all freeways and high-volume roadways (or another BAAQMD-approved modeled distance), and the plan identifies goals, policies, and objectives to minimize potentially adverse impacts. For example, the ARB Air Quality and Land Use Handbook recommends avoiding the siting of new sensitive land uses (e.g., residences, schools) within:

- Within 300 feet of large gasoline fueling stations (with a throughput of more than 3.6 million gallons of gasoline per year);
- Within 300 feet of dry-cleaning operations;

- Within 500 feet of freeways, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day; and
- Within 1,000 feet of a major rail service or maintenance yard.

Because the proposed project does not currently contain a land use diagram which identifies special overlay zones around existing and planned sources of TACs, MM AIR-1b would be required to ensure that future development facilitated by the proposed project would result in less than significant impacts related to exposing sensitive receptors to substantial pollutant concentrations. As detailed below, MM AIR-1b would require future projects that may result in additional TACs that are located within 1,000 feet of a sensitive receptors(s) or would place sensitive receptors within 1,000 feet of uses generating TACs, such as roadways with volumes of 10,000 average annual daily trips or greater, to implement BAAQMD Guidelines and OEHHA policies and procedures requiring an HRA for residential development and other sensitive receptors. Screening area distances may be increased on a case-by-case basis if an unusually large source or sources of hazardous emissions are proposed or currently exist. Based on the results of the HRA, that project would need to identify and implement measures (such as, but not limited to, air filtration systems) to reduce potential exposure to particulate matter, carbon monoxide, diesel fumes, and other potential health hazards. Measures identified in HRAs shall be included into the site development plan as a component of the project. MM AIR-1b would ensure that future development facilitated by the proposed project would result in less than significant impacts to sensitive receptors related to operational TACs.

Moreover, as discussed in Section 3.2.5, Regulatory Framework, the General Plan Update contains several policies and actions that aim to reduce the potential growth of vehicle use through encouraging the use of alternative modes of transportation, monitoring and improving existing sources of TACs throughout the City and reducing overall health impacts related to air quality in general. As such, this impact would be less than significant with implementation of MM AIR-1b.

Odor Impacts

While odors could be generated during construction activities, the proposed project is a General Plan Update, CAP Update, and Zoning Code Amendment and would not directly result in construction of any development project. Identification of potential impacts to odor receptors resulting from construction-generated odors, such as equipment exhaust, would require project-specific information for future individual land use development projects that is not currently known. As discussed in Section 3.2.7, Thresholds of Significance, consistent with the BAAQMD's CEQA Air Quality Guidelines, a plan-level analysis must acknowledge odor sources within the Planning Area and identify policies, goals, and objectives aimed at reducing potential odor impacts to ensure that potential impacts would be less than significant.

As discussed in Impact AIR-4, land uses associated with odor complaints typically include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations such as chemical and other manufacturing. As discussed in Section 3.2.7, Thresholds of Significance, a plan-level analysis must acknowledge odor sources within the Planning Area and identify policies, goals, and objectives aimed at reducing potential odor impacts to ensure that potential impacts would be less than significant. The City of South San Francisco contains several of the land uses listed by the

BAAQMD as potential odor sources, such as the Linden Stormwater Pump Station 6, South San Francisco–San Bruno Water Quality Control Plant, and various coffee shops that all have the potential to roast coffee beans on-site. As the City of South San Francisco is a fully urbanized and built-out city, it currently has, and the proposed project would facilitate future development of, sensitive receptors within the identified screening distances of existing odor sources.

Furthermore, the South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, contain Section 20.300.010 (Performance Standards), which establishes regulations related to odors and restricts uses, processes, or activities that produce objectionable odors that are perceptible without instruments by a reasonable person at the lot lines of a site. Sections 20.410.004 (Indoor Commercial Cannabis Cultivation), 20.410.005 (Commercial Cannabis Manufacturing), and 20.410.006 (Cannabis Testing Operations) require that operators install and maintain, in good working-order, air treatment or other ventilation systems to prevent odors generated from the cultivation of cannabis from being detected within 10 feet of the structure in which commercial cannabis cultivation occurs. In addition, BAAQMD Regulation 7 limits emissions of odorous substances within the Air Basin and would apply to any future odor source within the Planning Area. Therefore, compliance with the applicable regulations in the Zoning Ordinance as well applicable BAAQMD rules and regulations, would minimize odor emissions from adversely affecting a substantial number of people within the City and impacts would be less than significant.

Conclusion

As discussed above, the proposed project would not result in cumulatively considerable impacts related to odor impacts or cumulatively considerable impacts exposing sensitive receptors to substantial pollutant concentrations. Nonetheless, the proposed project would result in an inconsistency with the 2017 Clean Air Plan and a cumulatively considerable net increase in criteria pollutants as a result of VMT growth facilitated by the proposed project. As such, the proposed project would have a cumulatively considerable contribution to a cumulative impact. Even with implementation of the policies in the proposed project and all feasible mitigation, this impact would be significant and unavoidable.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MMs AIR-1a, AIR-1b, and TRANS-1.

Level of Significance After Mitigation

Significant and unavoidable.

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3.3 - Biological Resources

3.3.1 - Introduction

This section of the Draft Program Environmental Impact Report (Draft Program EIR) describes the existing biological resources within the South San Francisco General Plan Update Planning Area (Planning Area), including special-status plant and wildlife species, sensitive habitats, regulated waterways and wetlands, mature native trees, and wildlife movement corridors. This section evaluates impacts to biological resources that are anticipated to occur from implementation of the General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project). This section also identifies mitigation measures to reduce these potential effects to less than significant levels. Future discretionary projects facilitated by the proposed project will be evaluated for project-specific impacts related to biological resources at the time they are proposed.

The following is a summary of comments related to Biological Resources received in response to the Notice of Preparation (NOP). The comment letters are included in Appendix A.

- Recommends creating a procedure or checklist for evaluating subsequent project impacts on biological resources.
- Recommends that the Draft Program EIR provides baseline habitat assessments for special-status species plant, fish, and wildlife species located and potentially located within the project area and surrounding lands.
- Recommends that species specific surveys be conducted for special-status plant and wildlife species prior to project implementation.
- Recommends that the Draft Program EIR describe aquatic habitats, such as wetlands and/or waters of the United States or State, and any sensitive natural communities or riparian habitat in the project area.
- Recommends that the Draft Program EIR include the reasonably foreseeable direct and indirect changes (temporary and permanent) to biological resources, including cumulative impacts.
- Recommends implementation of avoidance and minimization measures for special-status species.
- Recommends that the proposed project avoid or minimize the use of artificial lighting to reduce nighttime light pollution.
- Recommends that the proposed project incorporate visual signals or cues to exterior windows to prevent bird collisions.
- Recommends that the proposed project avoid increases in stormwater runoff to streams that can cause hydromodification and erosion.
- States that if fencing is built, the proposed project use wildlife friendly fencing.

- Includes recommended mitigation measures to be included in the Draft Program EIR to protect State fully protected species, special-status species, nesting birds, and bat species.

Biological resources associated with the Planning Area were identified through a review of available background information (see Appendix C), which included the following:

- South San Francisco General Plan Update.
- South San Francisco Municipal Code.
- California Department of Fish and Wildlife's (CDFW) Natural Diversity Data Base (CNDDB) for reported occurrences of special-status vegetation communities, plants, and animals.
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California.
- United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) project planning tool for listed species, critical habitat, migratory birds, and other natural resources.

3.3.2 - Environmental Setting

Literature Review and Records Searches to Identify Existing Biological Resources

Existing Documentation

FirstCarbon Solutions (FCS) Biologists reviewed existing environmental documentation for the Planning Area and the immediate vicinity. This documentation included the South San Francisco General Plan Update, literature pertaining to the habitat requirements of special-status species potentially occurring on or near the Planning Area, and Federal Register listings, protocols, and species data provided by the USFWS and CDFW.

Topographic Maps and Aerial Photographs

An FCS Biologist reviewed current United States Geological Survey (USGS) 7.5-minute topographic quadrangle map(s) and aerial photographs as a preliminary analysis of the existing conditions within the Planning Area and immediate vicinity.[1] Information obtained from the review of the topographic maps included elevation range, general watershed information, and potential drainage feature locations using Google Earth in conjunction with the United States Environmental Protection Agency (EPA) Watershed Assessment, Tracking, and Environmental Results System (WATERS).[2] Aerial photographs provide a perspective of the most current site conditions relative to on-site and off-site land use, plant community locations, and potential locations of wildlife movement corridors.

[1] United States Geological Survey (USGS). 2022. National Geospatial Program. Website: https://www.usgs.gov/core-science-systems/national-geospatial-program/us-topo-maps-america?qt-science_support_page_related_con=4#qt-science_support_page_related_con. Accessed February 11, 2022.

[2] United States Environmental Protection Agency (EPA). 2022. Watershed Assessment, Tracking and Environmental Results System (WATERS). Website: https://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system. Accessed February 11, 2022.

Soil Surveys

The United States Department of Agriculture (USDA) has published soil surveys that describe the soil series (i.e., group of soils with similar profiles) occurring within a particular area.[3] These profiles include major horizons with similar thickness, arrangement, and other important characteristics. These series are further subdivided into soil mapping units that provide specific information regarding soil characteristics. Many special-status plant species have a limited distribution based exclusively on soil type. Because of much of the Planning Area being built up and developed, soils maps were not reviewed as part of the literature review.

Special-Status Species Database Search

An FCS Biologist compiled a list of threatened, endangered, and otherwise special-status species previously recorded within the general project vicinity. The list was also based on a search of the USFWS's IPaC online planning tool as well as a nine-quad search of the CNDDB, and the CNPS Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California for the *San Francisco South, California* USGS 7.5-minute Topographic Quadrangle Map and its six neighboring quads.[4,5,6,7] The database search results can be found in Appendix C.

The CNDDB Biogeographic Information and Observation System (BIOS 5) database was used to determine the distance between known recorded occurrences of special-status species and the Planning Area.[8]

Physical Habitat/Vegetation

The City contains habitats such as wetlands, grass and scrublands, mudflats, and tree stands (Exhibit 3.3-1). The City's shoreline is classified mostly as Estuarine and Marine Wetland habitat, with some smaller areas of coast classified as Estuarine and Marine Deepwater habitat.[9] Annual grassland, coastal scrub, chaparral, and oak woodland can be found within Sign Hill Park and San Bruno Mountain State Park; however, a majority of the City is highly urbanized and developed with little native habitat remaining except in open space and parklands. More specifically, the City contains mostly developed residential or commercial/industrial areas.

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[3] Natural Resources Conservation Service (NRCS). 2022. Web Soil Survey (WSS). United States Department of Agriculture (USDA). Website: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed February 11, 2022.

[4] United States Fish and Wildlife Service (USFWS). 2022. Information for Planning and Consultation. Website: https://ecos.fws.gov/ipac/. Accessed February 11, 2022.

[5] California Department of Fish and Wildlife (CDFW). 2022. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed February 11, 2022.

[6] California Native Plant Society (CNPS). 2022. California Native Plant Society Rare and Endangered Plant Inventory. Website: http://www.rareplants.cnps.org/. Accessed February 11, 2022.

[7] United States Geological Survey (USGS). 2022. National Geospatial Program. Website: https://www.usgs.gov/core-science-systems/national-geospatial-program/us-topo-maps-america?qt-science_support_page_related_con=4#qt-science_support_page_related_con. Accessed February 11, 2022.

[8] California Department of Fish and Wildlife (CDFW). 2022. Biogeographic Information and Observation System (BIOS 5). Website: https://wildlife.ca.gov/Data/BIOS/. Accessed February 11, 2022.

[9] United States Fish and Wildlife Service (USFWS). 2021. Wetlands Mapper. December 1. Website: https://www.fws.gov/wetlands/data/Mapper.html. Accessed February 11, 2022.

Wildlife

Within the urban environments that make up much of the City, landscaping can support a variety of birds such as house finch (*Haemorhous mexicanus*), house sparrow, (*Passer domesticus*) mourning dove (*Zenaida macroura*), and European starling (*Sturnus vulgaris*).

The open Bay waters that border the City support a wide variety of fish species, including over 100 marine fish species such as Pacific herring (*Clupea pallasiiis*) that pass through the area on their way from the San Francisco Bay to the Pacific Ocean. Notable bird species found in the Bay are cormorant (Phalacrocoracidae), brown pelican (*Pelecanus occidentalis*), grebe (*Podicipedidae* spp.), and diving ducks, such as scaup and canvasback (*Aythya* spp.). Coastline substrate may house marine worms and clams, while riprap and hard piling may support mussels and barnacles.

Special-status Species

Federal, State, and local agencies monitor sensitive and special-status wildlife species and plant communities in California. Special-status species are of relatively limited distribution and generally require specialized habitat conditions.

Special-status plants are those that meet the definition of "endangered, rare, or threatened" under California Environmental Quality Act (CEQA) Guidelines Section 15380. For the purposes of this Draft Program EIR, this includes all plant species that meet any of the following criteria:

- Listed or proposed for listing as threatened or endangered under the Endangered Species Act (50 Code of Federal Regulations [CFR] 17.12 [listed plants] and various notices in the Federal Register [proposed species]).
- Candidates for possible future listing as threatened or endangered under the Endangered Species Act.
- Listed or candidates for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (14 California Code of Regulations [CCR] 670.5).
- Listed as rare under the California Native Plant Protection Act (California Fish and Game Code [FGC] § 1900 *et seq.*).
- Considered by the CNPS to be rare, threatened, or endangered in California (CNPS Lists ranked 1B and 2B).

Special-status wildlife are animals that meet the definition of "endangered, rare, or threatened" under CEQA Guidelines Section 15380. For the purposes of this Draft Program EIR, this includes all animal species that meet any of the following criteria:

- Listed or proposed for listing as threatened or endangered under the Endangered Species Act (50 CFR 17.11 [listed animals] and various notices in the Federal Register [proposed species]).
- Candidates for possible future listing as threatened or endangered under the Endangered Species Act.

- Listed or candidates for listing by the State of California as threatened or endangered under CESA (14 CCR 670.5).
- Special protected by the federal Migratory Bird Treaty Act (MBTA) (16 United States Code [USC] 703-711).
- Species designated by the CDFW as Species of Special Concern.
- Species designated by the CDFW as Fully Protected.
- Otherwise protected under State or federal law.

The CDFW maintains the CNDDB, which maps known locations of species identified as rare, threatened, endangered, or of special concern by State and federal agencies. The CNDDB also maps plant and wildlife species considered rare by recognized entities, such as the CNPS.

Special-status Plant Species

The CNPS and CNDDB record searches conducted in February 2022 found 94 special-status plant species that have been recorded within the regional vicinity of the City (Appendix C).[10,11,12] A total of 48 special-status plants have been recorded within 5 miles or less of city limits.[13] Of the 48 sensitive plant species recorded throughout the City and its vicinity, eight are federally listed and include three evergreen shrubs and five annual flowering plants. The eight federally listed plant species include: Franciscan manzanita (*Arctostaphylos franciscana*), Presidio manzanita (*Arctostaphylos hookeri ravenii*), robust spineflower (*Chorizanthe robusta* var. *robusta*), beach layia (*Layia carnosa*), San Francisco lessingia (*Lessingia germanorum*), white-rayed pentachaeta (*Pentachaeta bellififlora*), California seablite (*Suaeda californica*) and two-fork clover (*Trifolium amoenum*). Of the 48 sensitive plant species recorded throughout the City, six are State listed species and include the Presidio manzanita, beach layia, San Francisco lessingia, white-rayed pentachaeta, San Bruno Mountain manzanita (*Arctostaphylos imbricata*), and Pacific manzanita (*Arctostaphylos pacifica*). Many of these sensitive plant species will most likely be found in the estuary habitats around San Francisco Bay. San Bruno Mountain State Park contains critical habitat for Choris' popcornflower (*Plagiobothrys chorisianus*). Other non-listed special-status plants known to occur in the vicinity the Planning Area include San Francisco owl's clover (*Triphysaria floribunda*), congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*), Point Reyes horkelia (*Horkelia marinensis*), and Kellogg's horkelia (*Horkelia cuneata* var. *sericea*).

[10] United States Fish and Wildlife Service (USFWS). 2022. Information for Planning and Consultation. Website: https://ecos.fws.gov/ipac/. Accessed February 11, 2022.
[11] California Department of Fish and Wildlife (CDFW). 2022. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed February 11, 2022.
[12] California Native Plant Society (CNPS). 2022. California Native Plant Society Rare and Endangered Plant Inventory. Website: http://www.rareplants.cnps.org/. Accessed February 11, 2022.
[13] California Department of Fish and Wildlife (CDFW). 2022. Biogeographic Information and Observation System (BIOS 5). Website: https://wildlife.ca.gov/Data/BIOS. Accessed February 11, 2022.

Special-status Wildlife Species

A CNDDB record search conducted in February 2022 found 69 sensitive wildlife species have been recorded within the regional vicinity of the City (Appendix C). [14,15] A total of 51 special-status wildlife have been recorded within 5 miles or less of city limits.[16] Out of these 51 special-status wildlife species recorded throughout the City of South San Francisco and its vicinity, eight are federally listed and include four butterfly species and four vertebrate species. The eight federally listed wildlife species include: San Bruno elfin butterfly (*Callophrys mossii bayensis*), tidewater goby (*Eucyclogobius newberryi*), Bay checkerspot butterfly (*Euphydryas editha bayensis*), mission blue butterfly (*Icaricia icarioides missionensis*), California Ridgway's rail (*Rallus obsoletus obsoletus*), California red-legged frog (*Rana draytonii*), callippe silverspot butterfly (*Speyeria callippe callippe*) and San Francisco gartersnake (*Thamnophis sirtalis tetrataenia*). Of the 51 sensitive wildlife species recorded throughout the City, five are State listed species and include the California Ridgway's rail, San Francisco gartersnake, California black rail (*Laterallus jamaicensis coturniculus*), bank swallow (*Riparia riparia*), and longfin smelt (*Spirinchus thaleichthys*). In addition, the remaining non-listed species are given special-status or are fully protected under the California Fish and Game Code and include Alameda song sparrow (*Melospiza melodia pusillula*), American peregrine falcon (*Falco peregrinus anatum*), Townsend's big-eared bat (*Corynorhinus townsendii*), and western bumble bee (*Bombus occidentalis*).

The 51 listed and special-status wildlife species are most likely to be found in parks within the City or in the surrounding hillsides. Shorebirds and aquatic species can be found along the eastern edge of the City, in the estuaries surrounding San Francisco Bay. A few of these wildlife species, such as birds and bats, may find suitable nesting habitat within buildings and other human-made structures. The species most adapted to man-made habitats include the Alameda song sparrow, American peregrine falcon, and Townsend's big-eared bat. Sensitive species nesting within trees, buildings, and other human-made structures may require special care during development activities, such as establishing buffers during construction or removing the sensitive wildlife prior to development. San Bruno Mountain State Park contains critical habitat for the Bay checkerspot butterfly.

Sensitive Natural Communities

Sensitive natural communities are vegetation communities or special wildlife habitats that are rare or occur in limited distributions or provide specific habitat requirements for special-status plant or wildlife species. The CDFW maintains a list of natural communities which attempts to classify vegetation types found within the State of California and rank them based on rarity. Communities ranked S1-S3 are considered sensitive natural communities.[17] Riparian vegetation communities are generally considered sensitive.

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[14] United States Fish and Wildlife Service (USFWS). 2022. Information for Planning and Consultation. Website: https://ecos.fws.gov/ipac/. Accessed February 11, 2022.

[15] California Department of Fish and Wildlife (CDFW). 2022. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed February 11, 2022.

[16] California Department of Fish and Wildlife (CDFW). 2022. Biogeographic Information and Observation System (BIOS 5). Website: https://wildlife.ca.gov/Data/BIOS. Accessed February 11, 2022.

[17] California Department of Fish and Wildlife (CDFW). 2021. Natural Communities List, Sacramento: California Department of Fish and Wildlife. https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities. Accessed September 28, 2021.

According to the CNDDB records search for the proposed project, the following sensitive natural communities are known to occur within 10 miles of the Planning Area:

- Northern Coastal Salt Marsh
- Northern Maritime Chaparral
- Serpentine Bunchgrass
- Valley Needlegrass Grassland

Furthermore, the Environmental and Cultural Stewardship Element identifies ecologically sensitive areas and habitat within the Planning Area (Exhibit 3.3-2), including:

- Colma Creek
- San Bruno Creek
- Navigable Slough of San Bruno Creek
- Tidal marsh, mudflats, ponds, and open water in San Francisco Bay
- Sign Hill Park
- San Bruno Mountain State Park

Wetlands and Waters of the United States and the State

Estuarine and marine wetlands line the City's coastline and parts of Colma Creek and San Bruno Creek. Colma Creek is located between San Bruno Mountain and the San Andreas Fault; it drains an area of 16.6 square miles as a single waterway at the center of the valley. Colma Creek is a perennial stream within the watershed that trends in a southeasterly direction through the center of the City and is the City's main natural drainage system. The headwaters of Colma Creek originate from San Bruno Mountain located to the north of the City. There are two main tributaries to Colma Creek within the City: Twelve Mile Creek and Spruce Creek. Twelve Mile Creek flows northeast to its confluence with Colma Creek, approximately 500 feet south of the Mission Road/Chestnut Avenue intersection. Spruce Creek flows northeast in the vicinity of Spruce Avenue to its confluence with Colma Creek near Spruce Avenue. Both tributary creeks have been entirely channelized, and in many areas have been constructed underground.

Since the establishment of the Colma Creek Flood Control Zone in 1964, the urbanization of the Colma Creek watershed saw peak stormwater flow steadily increase. The establishment of the Flood Control Zone in response to regular flooding in the sections of the creek downstream from Orange Memorial Park led to Colma Creek being culverted over up until 2006. Currently several sections of Colma Creek are now restrained by concrete flood control walls raised above street level. Many of the areas around Colma Creek are existing or former industrial uses and present a potential risk for hazardous materials spilling into the watershed and San Francisco Bay.

San Bruno Creek, which originates in the City of San Bruno, flows north through the southern portion of the City, and drains into the San Francisco Bay in the same location as Colma Creek. A navigable slough is located south of Colma Creek in the southeastern portion of the City.

Wildlife Movement Corridors

Wildlife corridors are connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as between foraging and denning areas, or they may be regional in nature, allowing movement across the landscape. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Maintaining the continuity of established wildlife corridors is important to sustain species with specific foraging requirements, preserve a species' distribution potential, and retain diversity among many wildlife populations. Therefore, resource agencies consider wildlife corridors to be a sensitive resource.

The San Francisco Bay provides essential natural resources for migratory birds on the Pacific Flyway. Pockets of parks and open space within the City provide space for wildlife and Colma Creek, San Bruno Creek, and Navigable Slough of San Bruno Creek provide connections between these open areas. The City's urban forest canopy can support the movement of a variety of migratory bird species, while creeks and drainages typically serve as movement corridors for wildlife. Exhibit 3.3-3 shows potential connectivity for wildlife species.

3.3.3 - Regulatory Framework

Federal

Endangered Species Act

The United States Congress passed the Endangered Species Act in 1973 to protect those species that are endangered or threatened with extinction. The Endangered Species Act is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

The Endangered Species Act prohibits the "take" of endangered or threatened wildlife species. "Take" is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (16 USC § 1531 *et seq*.). "Harm" is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 CFR § 17.3). "Harass" is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR § 17.3). Actions that result in take can result in civil or criminal penalties.

The Endangered Species Act and the Clean Water Act (CWA) Section 404 guidelines prohibit issuance of wetland permits for projects that jeopardize continued existence of any endangered or threatened species, or result in destruction or adverse modification of habitat of such species. The United States Army Corp of Engineers (USACE) must consult with the USFWS and/or the National Marine Fisheries Service (NOAA Fisheries) when threatened or endangered species under their jurisdiction may be affected by a proposed project. In the context of the proposed project, Endangered Species Act consultation would be initiated if development resulted in take of a threatened or endangered species or if issuance of a Section 404 permit or other federal agency action could result in take of an endangered species or adversely modify critical habitat of such a species.

Migratory Bird Treaty Act

Raptors (birds of prey), migratory birds, and other avian species are protected by several State and federal laws. The federal MBTA prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior.

Clean Water Act

The USACE regulates the discharge of dredge or fill material into waters of the United States under Section 404 of the CWA. "Discharges of fill material" is defined as the addition of fill material into waters of the United States, including, but not limited to, the following: placement of fill that is necessary for the construction of any structure or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes and subaqueous utility lines (33 CFR § 328.2(f)) In addition, Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Waters of the United States include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Boundaries between jurisdictional waters and uplands are determined in a variety of ways, depending on which type of waters is present. Methods for delineating wetlands and non-tidal waters are described below.

- Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR § 328.3(b)) Presently, to be a wetland, a site must exhibit three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the "normal circumstances" for the site.
- The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) (33 CFR § 328.4(c)(1)). The OHWM is defined by the USACE as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR § 328.3(e)).

State

California Endangered Species Act

The State of California enacted CESA in 1984. CESA pertains to State listed endangered and threatened species. CESA requires State agencies to consult with the CDFW when preparing CEQA documents. The purpose of CESA is to ensure that the lead agency actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of habitat essential to the continued existence of those species if there are reasonable and prudent alternatives available (FGC § 2080). CESA directs agencies to consult with the CDFW on projects or

actions that could affect listed species, directs the CDFW to determine whether jeopardy would occur, and allows the CDFW to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA allows the CDFW to authorize exceptions to the State's prohibition against take of a listed species if the take is incidental to carrying out an otherwise lawful project that has been approved under CEQA (FGC § 2081).

California Fish and Game Code

The California Fish and Game Code defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" (FGC § 86). Except for take related to scientific research, all take of fully protected species is prohibited. Fully protected fish species are protected under Fish and Game Code Section 5515; fully protected amphibian and reptile species are protected under Section 5050; fully protected bird species are protected under Section 3511; and fully protected mammal species are protected under Section 4700. Fish and Game Code Section 3503 prohibits the killing of birds or the destruction of bird nests. Section 3503.5 prohibits the killing of raptor species and the destruction of raptor nests. Fish and Game Code Sections 2062 and 2067 define "endangered and threatened species."

California Department of Fish and Wildlife Species of Concern

In addition to formal listing under the Endangered Species Act and CESA, species receive additional consideration by the CDFW and local lead agencies during the CEQA process. Species that may be considered for review are included on a list of "Species of Special Concern," developed by the CDFW. It tracks species in California whose numbers, reproductive success, or habitats may be threatened. In addition to Species of Special Concern, the CDFW identifies animals that are tracked by the CNDDB, but warrant no federal interest and no legal protection. These species are identified as "California Special Animals."

Porter-Cologne Water Quality Control Act

The CDFW is a trustee agency that has jurisdiction under Fish and Game Code Section 1600, *et seq*. Under Fish and Game Codes Sections 1602 and 1603, a private party must notify the CDFW if a proposed project would "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds . . . except when the department has been notified pursuant to Section 1601." Additionally, the CDFW may assert jurisdiction over native riparian habitat adjacent to aquatic features, including native trees over 4 inches in diameter at breast height (DBH). If an existing fish or wildlife resource may be substantially adversely affected by the activity, the CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with the CDFW identifying the approved activities and associated mitigation measures.

Section 13260(a) of the Porter-Cologne Water Quality Control Act (contained in the California Water Code) requires any person discharging waste or proposing to discharge waste, other than to a community sewer system, within any region that could affect the quality of the waters of the State (all surface and subsurface waters) to file a report of waste discharge. The discharge of dredged or fill material may constitute a discharge of waste that could affect the quality of waters of the State.

Historically, California relied on its authority under Section 401 of the CWA to regulate discharges of dredged or fill material to California waters, which requires an applicant to obtain "water quality certification" from the California State Water Resources Control Board (State Water Board) through its nine Regional Water Quality Control Boards (RWQCBs) to ensure compliance with State water quality standards before certain federal licenses or permits may be issued. The permits subject to Section 401 include permits for the discharge of dredged or fill material (CWA Section 404 permits) issued by the USACE. Waste discharge requirements under the Porter-Cologne Water Quality Control Act were typically waived for projects that required certification. With recent changes that limited jurisdiction of wetlands under the CWA, the State Water Board has needed to rely on the report of the waste discharge process.

California Native Plant Protection Act

The CNPS maintains a rank of plant species native to California that has low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Plants of California. Potential impacts to populations of CNPS ranked plants receive consideration under CEQA review. The following identifies the definitions of the CNPS ranks:

- **Rank 1A:** Plants presumed extirpated in California and either rare or extinct elsewhere
- **Rank 1B:** Plants rare, threatened, or endangered in California and elsewhere
- **Rank 2A:** Plants presumed extirpated in California but common elsewhere
- **Rank 2B:** Plants rare, threatened, or endangered in California, but more numerous elsewhere
- **Rank 3:** Plants about which more information is needed
- **Rank 4:** Watch List: Plants of limited distribution

All plants appearing on CNPS List ranked 1 or 2 are considered to meet CEQA Guidelines Section 15380 criteria. While only some of the plants ranked 3 and 4 meet the definitions of threatened or endangered species, the CNPS recommends that all Rank 3 and Rank 4 plants be evaluated for consideration under CEQA.

Regional

San Francisco Bay Conservation and Development Commission

The San Francisco Bay Conservation and Development Commission (BCDC) has jurisdiction over all areas of San Francisco Bay that are subject to tidal action. (Tidal action is defined by the shoreline that extends up to mean high water, except in marsh areas, where BCDC's jurisdiction extends to 5 feet above mean sea level.) The BCDC also has "shoreline band" jurisdiction over an area 100 feet wide inland and parallel to the shoreline. For projects within BCDC jurisdiction, permits may be required, depending on the nature of the activity. Those projects requiring a permit must comply with the requirements of the McAteer-Petris Act and the San Francisco Bay Plan. The City of South San Francisco is located within Plan Map 6, Central South Bay.[18]

[18] San Francisco Bay Conservation and Development Commission (BCDC). 2020. San Francisco Bay Plan. Website: https://www.bcdc.ca.gov/pdf/bayplan/bayplan.pdf#page=109. May 5.

San Bruno Mountain Habitat Conservation Plan

The purpose of the San Bruno Mountain Habitat Conservation Plan (HCP) is to provide guidance for developing scientifically sound management and monitoring plans for the conservation of (a) the habitat of the mission blue, callippe silverspot, San Bruno elfin, and Bay checkerspot butterflies, and (b) the overall native ecosystem of San Bruno Mountain in perpetuity. The HCP is an implementation plan for the management and monitoring activities authorized in the HCP and is based on lessons learned from habitat management activities conducted over the past 33 years. These efforts have protected the core habitat areas (comprising approximately 1,290 acres) of the mission blue, callippe silverspot, and San Bruno elfin butterfly populations—the three known listed butterflies that occur on the mountain—from being overtaken by weed infestations and scrub encroachment. These efforts, however, have focused on the highest priority invasive species and current management and funding are incapable of controlling all invasive species that are present on the mountain.

The San Bruno Mountain Habitat Management Plan (HMP) was prepared in September 2007 (revised March 2008) in support of the San Bruno HCP. The purpose of the HMP is to provide a management and monitoring plan for the protection and management of the habitat of the three federally listed endangered butterflies and the overall native ecosystem of San Bruno Mountain. The HMP is authorized in the San Bruno HCP as an implementation plan which provides methods, proposed work areas, and expected costs to achieve the goals of the HCP.

An addendum to the San Bruno Mountain HMP was prepared in April 2021. The addendum includes provisions on updated habitat management impact minimization measures for each of the endangered butterflies. It also includes provisions to regulate vegetation management work such as mowing, invasive plant treatments, and prohibited herbicide ingredients.

Local

South San Francisco General Plan Update

The General Plan Update includes the following policies and actions that assist in reducing or avoiding potential impacts related to biological resources:

Environmental and Cultural Stewardship Element

Policy ES-1.1 Develop a connected open space network. Continue to develop a system of well-connected parks and open spaces to support biodiversity, enable the movement of wildlife, and increase climate resilience.

Policy ES-1.2 Strive for habitat diversity across the City. Strive for habitat diversity ranging from coastal wetlands and marshes to upland habitats.

Policy ES-1.3 Create a connected network of wildlife corridors. Transform Colma Creek, implement the City's Urban Forest Master Plan, and manage the Bay Trail and Centennial Way to create a connected network of wildlife corridors.

Policy ES-1.4 Planting for biodiversity. Discourage the use of invasive, non-native plantings in landscape areas across the City, working with regional agencies and local nurseries to educate residents and employers in removing non-native plant species and instead using native species.

Policy ES-2.1 Protect marsh and wetland habitat. Protect and expand existing marsh and wetland habitat to improve water quality, adapt to climate change, and provide habitat for wildlife.

Policy ES-2.2 Maintain development standards adjacent to the San Francisco Bay to support habitat. Maintain standards and guidelines for new construction within 150 feet of San Francisco Bay that support the health of the Bay. This policy includes:

- Requiring no net new impervious areas.
- Maintaining (or increasing) building setbacks to support habitat areas and adaptation.
- Requiring new construction to construct bioswales or similar features to treat runoff before it enters the Bay.
- Requiring low intensity lighting to reduce the amount of light reaching sensitive habitat.
- Using a planting palette consisting of native species and species that provide valuable resources for native wildlife.
- Requiring an assessment as part of the California Environmental Quality Act (CEQA) process to consider wildlife impacts before project approval to continue to protect special-status of species.

Action ES-2.2.1 Require bird safe design East of 101. Develop a bird safe design ordinance to minimize the adverse effects on native and migratory birds and require new development East of 101 to incorporate design measures.

Policy ES-3.1 Colma Creek as an ecological corridor. Enhance Colma Creek as an ecological corridor, restoring creek ecologies and creating transitional habitat zones to build resilience and ecosystem services.

Policy ES-3.2 Co-locate park and open space patches along Coloma Creek. Co-locate park and open space features along Colma Creek to create opportunities for green infrastructure and natural habitat.

Policy ES-3.3 Maintain development standards along Colma Creek to support habitat. Maintain development standards and guidelines for new construction within 80 feet that support urban ecology and ecosystem resilience. Provide project applicants with a process for exemptions and/or offsets under limited circumstances. Standards include:

- Requiring no net new impervious areas.

- Maintaining (or increasing) building setbacks to support habitat areas.
- Encouraging new construction to construct bioswales or similar features to treat runoff before it enters the creek.
- Using a planting palette consisting of native species and species that provide valuable resources for native wildlife.

Policy ES-4.1 Expand tree canopy cover. Expand the canopy cover to increase environmental benefits, prioritizing disadvantaged communities and connected wildlife corridors.

Action ES-4.1.1 Implement Urban Forest Plan: Implement the City's Urban Forest Plan.

Policy ES-4.2 Avoid tree removal. Avoid removing trees whenever possible. When removals are warranted, replace each removed tree with three new trees.

Policy ES-4.3 Support the staged succession of tree planting. Plan in advance to remove and replant trees to guide tree planting priorities and help shape the character of the city.

Policy ES-4.4 Plan for tree planting to promote tree health. Plan for trees before planting to promote the health and longevity of individual trees, reduce mortality/tree removals, and improve habitat for wildlife. Establish a design standard for minimum soil depth to facilitate robust tree growth.

Policy ES-4.6 Support education and engagement about the urban forest. Increase support for the enhancement of the urban forest through forestry programming, information distribution, and advocacy groups.

Policy ES-5.1 Remove invasive species. Prohibit invasive species identified on the California Invasive Plant Council list in new construction and landscape renovations.

Policy ES-5.2 Control and manage invasive plants found on-site. Use best management practices during construction and subsequent site maintenance to manage and control invasive species found on-site, including clearing infested areas prior to construction, planting native seed from a local source, and avoiding seed dispersal through construction equipment use.

Policy ES-5.3 Use a waterwise planting palette during new construction. During new construction or landscape renovations, prioritize xeriscaping, low-water-use plants, and native plants, minimizing the total area of high-water-use plants (e.g., turf and water features).

Policy ES-5.4 Preserve native plant during construction. During new construction or landscape renovations, preserve portions of a lot largely occupied by native species. Replace non-native vegetation with natives except when the non-native vegetation support habitat particularly useful to native wildlife.

Policy ES-5.5 Plant using a multi-layered cluster to support wildlife. Design plantings in multi-layered clusters, placing groundcover, shrub, and tree canopy layers in the same area to support wildlife.

Policy ES-5.6 Create pollinator habitats in medians and landscapes. Continue to create pollinator habitats in medians and landscapes to act as pollinator islands to give respite to wildlife going from the coastal range to San Bruno Mountain.

Policy ES 5.7 Discourage herbicide and pesticide use. Discourage the use of herbicides and pesticides.

Policy ES-6.1 Catalog wildlife and plant inventories. Continue to catalog and update information on threatened and endangered species in the review of project proposals.

Policy ES-6.2 Conduct wildlife and plant assessments for new development. Require assessments for new developments in areas that could impact threatened or endangered species.

Policy ES-6.3 Conduct site-specific assessments for new development in ecologically sensitive habitat areas. On a parcel-by-parcel basis, require that permit applications for projects located within ecologically sensitive habitat areas, as shown on Figure 50, prepare site-specific biological assessments for review and approval by City Planning staff, and incorporation of the recommended measures during construction to protect ecologically sensitive habitat areas.

Policy ES-7.1 Develop and implement comprehensive watershed management strategy. Partner with regional and local agencies to develop a comprehensive watershed management strategy that identifies programs, partnerships, actions, and incentives that the City and partners can take to protect the City's water resources and aquatic areas. Collaborate with regional agencies and neighboring jurisdictions to manage stormwater, reduce impervious surfaces, and improve water quality in the Colma Creek watershed.

Policy ES-7.2 Integrate green infrastructure in City projects. Integrate green infrastructure strategies into City-owned landscapes to improve water quality and reduce the need to irrigate landscapes.

Policy ES-7.3 Require stormwater management practices for new and redevelopment projects. Continue to require new development and redevelopment projects to meet federal, State, regional, and local stormwater requirements, including site design, stormwater treatment, stormwater infiltration, peak flow reduction, and trash capture.

Policy ES-7.4 Encourage pervious surfaces. Encourage pervious surfaces in new developments.

City of South San Francisco Climate Action Plan

The Climate Action Plan (CAP) includes the following actions that assist in reducing or avoiding impacts related to biological resources:

Action WW 1.1 Landscaping Water Requirements. Achieve greater water use reductions than WELO by requiring all landscapes obtain a landscape permit, decreasing the size threshold to capture all landscape renovations, adding prescriptive irrigation plant lists, or water budget requirements.

Action WW 1.4 Landscaping Plant List. Develop a plant list, landscaping palette for efficiency and habitat/wildlife for new development and landscape retrofits.

Action CS 2.1 Public Tree Planting. Expand the canopy cover to reach the goals of the Urban Forest Master Plan and increase environmental benefits, prioritizing disadvantaged communities and connected wildlife corridors.

Action CS 3.1 Colma Creek Restoration. Enhance Colma Creek as an ecological corridor, restoring 5 miles of creek ecologies and creating transitional habitat zones to build resilience and ecosystem services. Protect and expand existing marsh and wetland habitat to improve water quality, adapt to climate change, and provide habitat for wildlife.

City of South San Francisco Municipal Code

Chapter 13.28 Street Tree Ordinance of the City of South San Francisco

Section 13.28.110 (Construction areas) requires a tree removal permit for any construction activities on or adjacent to public property that requires removal of a tree planted on the property. As a condition of permit issuance, the applicant shall be required to replace the tree with one of the same size and species in a location designated by the director. In addition, under Section 13.28.110, no person shall excavate any ditches, tunnels or trenches or install pavement within a radius of four feet from any street tree without written permission of the director. A person performing any work of excavation or construction on any street or publicly owned property shall guard and protect the tree so as to prevent injury thereof.

Chapter 13.30 Tree Preservation.

Chapter 13.30 of the Municipal Code discusses preservation of the City's trees to preserve the scenic beauty of the City, maintain ecological balance, prevent erosion of topsoil, counteract air pollution, oxygenate the air, absorb noise, maintain climatic and microclimatic balance, help block wind, and provide shade and color. This chapter also provides standards and requirements for the protection of certain large trees and trees with unique characteristics; provides standards and requirements for planting and maintenance of trees for new development; and establishes recommended standards for planting and maintaining trees on property that is already developed.

City of South San Francisco Zoning Ordinance

The following existing chapter of the South San Francisco Zoning Ordinance assists in reducing or avoiding impacts related to biological resources.

Chapter 20.170 Special Environmental Studies Overlay District (existing)

Section 20.170.003 (Habitat and Biological Resource Conservation Areas) (existing) requires a site-specific assessment of biological resources for all development proposals in areas of the Special Environmental Studies (ES) Overlay District that have been identified as ecologically sensitive habitat as shown on a map or maps maintained by the City in compliance with the following standards:

A. **Site Design.** Sensitive habitat areas shall be protected in the following order: (1) avoidance; (2) on-site mitigation; (3) off-site mitigation; and (4) purchase of mitigation credits.

B. **Biological Report.** A development application for a project on a site located within an area identified as ecologically sensitive habitat shall also include a report by a Biologist or other qualified professional that contains the following:
   1. An evaluation of the impacts the development may have on the habitat, and whether the development will be consistent with the biological continuance of the habitat. Maximum feasible mitigation measures to protect the resource shall be identified and a program for monitoring and evaluating the effectiveness of the mitigation measures shall be included.
   2. Conditions of approval recommendations for the restoration of damaged habitats, where feasible, including recommendations for the removal and prevention of re-establishment of invasive species.

C. **Required Findings.** Approval of a development permit for a project on a site located within an area identified as ecologically sensitive habitat shall not occur unless the applicable review body first finds that:
   1. There will be no significant negative impact on the identified sensitive habitat and the proposed use will be consistent with the biological continuance of the habitat.
   2. The proposed use will not significantly disrupt the habitat.
   3. Adequate mitigation measures are required to mitigate impacts to significant biological resources.
   4. There has been “no net loss” of wetlands. Disturbed wetlands have been replaced with the same type of wetlands.
   5. Where feasible, damaged habitats will be restored as a condition of development approval. (Ordinance 1432 § 2, 2010).

3.3.4 - Methodology

Impacts related to biological resources resulting from implementation of the proposed project (collectively, the General Plan Update, Zoning Code Amendments, and Climate Action Plan) are discussed below. Impacts on biological resources were evaluated based on the likelihood that special-status species, sensitive habitats, wildlife corridors, and protected trees are present within the Planning Area, and the likely effects of project construction or operation of future development projects on these resources and State and federally protected waters. For the purposes of this Draft Program EIR, the word “substantial” as used in the significance thresholds above is defined by the following three principal components:

- Magnitude and duration of the impact (e.g., substantial/not substantial),

- Uniqueness of the affected resource (rarity), and
- Susceptibility of the affected resource to disturbance.

3.3.5 - Thresholds of Significance

According to CEQA Guidelines Appendix G, Environmental Checklist, biological resources impacts resulting from the implementation of the proposed project would be considered significant if the proposed project would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service?

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service?

c) 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?

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

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

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan?

3.3.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where appropriate.

Special-status Species

Impact BIO-1:	**The proposed project could have a substantial adverse effect, either directly 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 the California Department of Fish and Wildlife or United States Fish and Wildlife Service.**

As cited in the Environmental Setting section, 48 special-status plant species and 51 special-status animal species were recorded to occur within 5 miles or less of the South San Francisco Planning Area. The sensitive plant species are most likely to be found in the estuary habitats around San Francisco Bay. San Bruno Mountain State Park contains critical habitat for Choris' popcornflower. The special-status wildlife species are most likely to be found in parks within the City or in the

surrounding hillsides. Shorebirds and aquatic species can be found along the eastern edge of the City, in the estuaries surrounding San Francisco Bay. A few of these wildlife species, such as birds and bats, may find suitable nesting habitat within buildings and other human-made structures. The species most adapted to man-made habitats include the Alameda song sparrow, American peregrine falcon, and Townsend's big-eared bat. San Bruno Mountain State Park contains critical habitat for the Bay checkerspot butterfly.

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. Because South San Francisco is a fully built City, new development would primarily occur on parcels that already contain some existing homes or businesses, with the majority of potential growth occurring within the East of 101, Lindenville, Downtown, and El Camino planning sub-areas (Chapter 2, Project Description, Exhibit 2-5). Additionally, the proposed project may result in other private and public improvements throughout the City with the potential for environmental effects related to biological resources (see Chapter 2, Project Description, Sections 2.5.2, 2.5.5, and 2.5.6). Therefore, subsequent development under the proposed project could result in the direct/indirect loss or indirect disturbance of special-status plant or animal species or their habitats that are known to occur, or have potential to occur, in the region.

Significant impacts on special-status plant species associated with individual subsequent projects could include the direct loss of individual plants and of habitat areas associated with these special-status plant species. Indirect impacts to special-status plant species could include habitat degradation as a result of impacts to water quantity and quality.

Significant impacts on special-status wildlife species associated with individual subsequent projects could include, but are not limited to, the following:

- Increased mortality caused by higher numbers of automobiles in new areas of development.
- Direct mortality from the collapse of underground burrows, resulting from soil compaction.
- Direct mortality resulting from the movement of equipment and vehicles through construction areas.
- Direct mortality resulting from removal of trees with active nests.
- Direct mortality or loss of suitable habitat resulting from the trimming or removal of obligate host plants.
- Direct mortality resulting from the filling of wetlands features.
- Loss of breeding and foraging habitat resulting from the filling of seasonal or perennial wetlands.
- Loss of breeding, foraging, and refuge habitat resulting from the permanent removal of riparian vegetation.
- Loss of suitable habitat for vernal pool invertebrates resulting from the destruction or degradation of vernal pools or seasonal wetlands.

- Abandonment of eggs or young and subsequent nest failure for special-status nesting birds, including raptors, and other non special-status migratory birds resulting from construction-related noises.
- Loss or disturbance of rookeries and other colonial nests.
- Loss of suitable foraging habitat for special-status raptor species.
- Loss of migration corridors resulting from the construction of permanent structures or features.
- Impacts to fisheries/species associated with waterways.

Special-status plant and animal species receive protection from various federal and State laws and regulations, including the Endangered Species Act and CESA. These regulations generally prohibit the taking of protected plant and animal species, or direct impacts to foraging or breeding habitat, without a special permit.

The General Plan Update includes policies and actions specifically designed to address these potential impacts to biological resources. Policy ES-2.1 requires the City to protect and expand existing marsh and wetland habitat to improve water quality, adapt to climate change, and provide habitat for wildlife. Policy ES-2.2 requires the City to maintain standards and guidelines for new construction within 150 feet of San Francisco Bay that support the health of the Bay, such as the installation of bioswales to treat runoff before it enters the Bay, use of low intensity lighting to reduce the amount of light reaching sensitive habitat, and requiring an assessment as part of the CEQA process to consider wildlife impacts before project approval to continue to protect special-status of species. Action ES-2.2.1 requires the City to develop a bird safe design ordinance to minimize the adverse effects on native and migratory birds and require new development East of 101 to incorporate design measures. Policy ES-3.3 requires the City to maintain development standards and guidelines for new construction within 80 feet of Colma Creek, such as maintaining or increasing building setbacks to support habitat areas. Policy ES-6.1 requires the City to continue to catalog and update information on threatened and endangered wildlife and plant species in the review of project proposals. Policy ES-6.2 requires wildlife and plant assessments for new development in areas that could impact threatened or endangered species. Policy ES-6.3 requires that permit applications for projects located within ecologically sensitive habitat areas prepare site-specific biological assessments for review and approval by City Planning staff, and incorporation of the recommended measures during construction to protect ecologically sensitive habitat areas.

The South San Francisco Zoning Ordinance contains rules and regulations regarding development in areas with sensitive habitats. Chapter 20.170 (existing) creates a Special ES Overlay District to protect areas of high biological value. Section 20.170.003 (Habitat and Biological Resource Conservation Areas) (existing) requires a site-specific assessment of biological resources for all development proposals in areas of the Special ES Overlay District that have been identified as ecologically sensitive habitat (such as Sign Hill Park, San Bruno Mountain State Park, and the saltmarshes along San Francisco Bay) as shown on a map or maps maintained by the City. Section 20.170.003 also requires that sensitive habitat areas be protected in the following order: (1) avoidance; (2) on-site mitigation; (3) off-site mitigation; and (4) purchase of mitigation credits.

Future development under the proposed project would be required to comply with the various federal and State laws and regulations that protect special-status plant and animal species, including the Endangered Species Act and CESA. In addition, future projects would comply with requirements of the South San Francisco Zoning Ordinance and the General Plan Update policies and actions related to biological resources. To further enhance and ensure protection of threatened and endangered species, as well as nesting and migratory birds, Mitigation Measure (MM) BIO-1 shall be implemented. MM BIO-1 requires that focused surveys be conducted by any project applicant or sponsor to determine whether special-status species, nesting birds, or migratory birds occur on a given project site, and that potential impacts to special-status species be avoided and minimized, and that any losses be fully compensated on-site or at a habitat mitigation bank.

Implementation of these requirements, policies, and actions will have both direct and indirect beneficial effects for species by avoiding the most biologically sensitive areas, concentrating development in previously disturbed areas, requiring surveys, and by emphasizing avoidance, minimization, and mitigation of impacts to habitats. Therefore, with mandatory regulatory compliance and implementation of MM BIO-1, future development projects would not result in significant adverse effects to biological resources and impacts would be considered less than significant with mitigation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM BIO-1 Special-status Species, Migratory Birds, and Nesting Birds

Special-status species are those listed as Endangered, Threatened or Rare, or as Candidates for listing by the United States Fish and Wildlife Service (USFWS) and/or California Department of Fish and Wildlife (CDFW), or as Rare Plant Rank 1B or 2B species by the California Native Plant Society (CNPS). This designation also includes CDFW Species of Special Concern and Fully Protected Species. Applicants or sponsors of projects on sites where potential special-status species, migratory birds, or nesting birds are present shall retain a qualified Biologist to conduct a focused survey per applicable regulatory agency protocols to determine whether such species occur on a given project site. The project applicant or sponsor shall ensure that, if development of occupied habitat must occur, species impacts shall be avoided or minimized, and if required by a regulatory agency or the CEQA process, loss of wildlife habitat or individual plants shall be fully compensated on the site. If off-site mitigation is necessary, it shall occur within the South San Francisco Planning Area whenever possible, with a priority given to existing habitat mitigation banks. Habitat mitigation shall be accompanied by a long-term management plan and monitoring program prepared by a qualified Biologist, and include provisions for protection of mitigation lands in perpetuity through the establishment of easements and adequate funding for maintenance and monitoring.

Level of Significance After Mitigation

Less than significant impact.

Sensitive Natural Communities

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

As discussed in the Environmental Setting section, the following sensitive natural communities are known to occur within 10 miles of the Planning Area: Northern Coastal Salt Marsh, Northern Maritime Chaparral, Serpentine Bunchgrass, and Valley Needlegrass Grassland. While not always documented as sensitive natural communities in the CNDDB, streams, rivers, and estuaries are of high concern because they provide unique aquatic habitat for many endemic species, including special-status plants, birds, invertebrates, amphibians, and fish species. These aquatic habitats oftentimes qualify as protected wetlands or jurisdictional waters and are protected from disturbance through the CWA (see Impact BIO-3). Furthermore, the Environmental and Cultural Stewardship Element identifies the following ecologically sensitive areas and habitat within the Planning Area (Exhibit 3.3-2), including: Colma Creek, San Bruno Creek, Navigable Slough of San Bruno Creek, Sign Hill Park, San Bruno Mountain State Park, and the tidal marsh mudflats, ponds, and open water in San Francisco Bay.

Subsequent development under the proposed project, primarily adjacent to the San Francisco Bay, could result in direct or indirect effects on estuarine habitat and other sensitive marine communities. Subsequent development could also result in the direct or indirect effects on other sensitive habitats as defined by the CNDDB or ecologically sensitive areas and habitat as described in the Environmental and Cultural Stewardship Element.

Riparian habitats and sensitive natural communities receive protection under the California Fish and Game Code (FGC §§ 1601–1603). Any proposed activities that would divert or obstruct the natural flow or change the bed, channel, or bank of any lake or stream, must obtain a “Streambed Alteration Agreement” from the CDFW prior to any alteration of a lake bed, stream channel, or their banks. Through this agreement, the CDFW may impose conditions to limit and fully mitigate impacts on fish and wildlife resources.

The General Plan Update includes policies and actions designed to protect riparian habitat and other sensitive natural communities. Policy ES-2.1 requires the City to protect and expand existing marsh and wetland habitat to improve water quality, adapt to climate change, and provide habitat for wildlife. Policy ES-2.2 requires the City to maintain standards and guidelines for new construction within 150 feet of San Francisco Bay that support the health of the Bay, such as maintaining (or increasing) building setbacks to support habitat areas and requiring the installation of bioswales to treat runoff before it enters the Bay. Policy ES-3.3 requires the City to maintain development standards and guidelines for new construction within 80 feet of Colma Creek, such as maintaining or increasing building setbacks to support habitat areas. Policy ES-6.3 requires that permit applications for projects located within ecologically sensitive habitat areas prepare site-specific biological

assessments for review and approval by City Planning staff, and incorporation of the recommended measures during construction to protect ecologically sensitive habitat areas.

The South San Francisco Zoning Ordinance contains rules and regulations regarding development in areas with sensitive habitats. Section 20.170.003 (Habitat and Biological Resource Conservation Areas) (existing) requires a site-specific assessment of biological resources for all development proposals in areas of the Special ES Overlay District that have been identified as ecologically sensitive habitat (such as Sign Hill Park, San Bruno Mountain State Park, and the saltmarshes along San Francisco Bay) as shown on a map or maps maintained by the City. Section 20.170.003 (existing) also requires that sensitive habitat areas be protected in the following order: (1) avoidance; (2) on-site mitigation; (3) off-site mitigation; and (4) purchase of mitigation credits. Lastly, Section 20.170.003 (existing) requires that approval of a development permit for a project on a site located within an area identified as ecologically sensitive habitat shall not occur unless the applicable review body first finds that there will be no significant negative impact on the identified sensitive habitat and the proposed use will be consistent with the biological continuance of the habitat.

The CAP includes actions to enhance biological resources in the Planning Area. Implementation of Action CS 3.1 would enhance Colma Creek as an ecological corridor, restoring 5 miles of creek ecologies, and creating transitional habitat zones to build resilience and ecosystem services, which would assist in enhancing riparian habitat in the Planning Area. Implementation of Action CS 2.1 would expand the canopy cover to reach the goals of the Urban Forest Master Plan and increase environmental benefits, prioritizing connected wildlife corridors.

Future development under the proposed project would comply with adopted State, federal, and local regulations for the protection of riparian habitat and other sensitive natural communities. In addition, future projects would comply with requirements of the General Plan Update policies and actions and the South San Francisco Zoning Ordinance related to the protection of these biological resources. Implementation of these policies, actions, and requirements would reduce potential impacts to below a level of significance and would have both direct and indirect beneficial effects on riparian habitat and other sensitive natural communities by avoiding the most biologically sensitive areas, requiring site-specific biological assessments, concentrating development in previously disturbed areas, and by emphasizing avoidance, minimization, and mitigation of impacts through development guidelines and standards. Therefore, future development under the proposed project would not result in significant adverse effects to riparian habitat or other sensitive natural communities. Impacts would be considered less than significant.

Level of Significance

Less than significant impact.

Wetlands and Jurisdictional Features

Impact BIO-3:	**The proposed project could have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.**

As discussed in the Environmental Setting section, estuarine and marine wetlands line the City's coastline and parts of Colma Creek and San Bruno Creek. A navigable slough is located south of Colma Creek in the southeastern portion of the City.

Subsequent development under the proposed project, primarily adjacent to the San Francisco Bay, could result in direct or indirect effects on estuarine habitat and other sensitive marine communities (Exhibit 3.3-1). Federally protected wetlands and other waters of the United States and/or State could be affected through direct removal, filling, hydrological interruption (including dewatering), alteration of bed and bank, and other construction-related activities, which could result in significant environmental impacts.

Section 404 of the CWA requires any project that involves disturbance to a wetland or waters of the United States to obtain a permit that authorizes the disturbance. If a wetland or jurisdictional water is determined to be present, then a permit must be obtained from the USACE to authorize a disturbance to the wetland. Although subsequent projects may disturb protected wetlands and/or jurisdictional waters, the regulatory process that is established through Section 404 of the CWA ensures that there is "no net loss" of wetlands or jurisdictional waters. If, through the design process, it is determined that a future development project cannot avoid a wetland or jurisdictional water, then the USACE would require that there be an equal amount of wetland created elsewhere to mitigate any loss of wetland.

Section 401 of the CWA (33 USC § 1341) requires an applicant who is seeking a 404 permit to first obtain a water quality certification from the RWQCB. To issue a water quality certification, the RWQCB must indicate that the proposed fill is consistent with the standards set forth by the State and confirm that any discharge into jurisdictional waters will comply with applicable effluent limitations and water quality standards.

The General Plan Update includes policies and actions designed to protect wetlands and waters of the United States and/or waters of the State. Policy ES-2.1 requires the City to protect and expand existing marsh and wetland habitat to improve water quality, adapt to climate change, and provide habitat for wildlife. Policy ES-2.2 requires the City to maintain standards and guidelines for new construction within 150 feet of San Francisco Bay that support the health of the Bay, such as requiring no net new impervious areas, maintaining (or increasing) building setbacks to support habitat areas, and requiring the installation of bioswales to treat runoff before it enters the Bay. Policy ES-3.3 requires the City to maintain development standards and guidelines for new construction within 80 feet of Colma Creek, such as requiring no net new impervious areas, maintaining, or increasing building setbacks to support habitat areas, and encouraging new construction to construct bioswales or similar features to treat runoff before it enters the creek. Policy ES-7.1 requires the City to partner with regional and local agencies to develop a comprehensive watershed management strategy that identifies programs, partnerships, actions, and incentives that the City and partners can take to protect the City's water resources and aquatic areas.

The South San Francisco Zoning Ordinance contains rules and regulations regarding development in areas with sensitive habitats, including wetlands. Section 20.170.003 (Habitat and Biological

Resource Conservation Areas) (existing) requires a site-specific assessment of biological resources for all development proposals in areas of the Special ES Overlay District that have been identified as ecologically sensitive habitat, such as the saltmarshes along San Francisco Bay. Section 20.170.003 (existing) requires that approval of a development permit for a project on a site located within an area identified as ecologically sensitive habitat shall not occur unless the applicable review body first finds that there has been "no net loss" of wetlands and that disturbed wetlands have been replaced with the same type of wetlands.

To further ensure protection of wetlands and waters of the United States and/or State, MM BIO-3 is included, which requires that a qualified Biologist/wetland regulatory specialist conduct a site investigation and assessment for projects on sites where potential jurisdictional wetlands or waterways are present. MM BIO-3 further requires that if a feature is found to be jurisdictional or potentially jurisdictional, that the applicant shall comply with the appropriate permitting process with each agency claiming jurisdiction prior to disturbance of the feature.

Future development under the proposed project would comply with adopted State, federal, and local regulations for the protection of wetlands and waters of the United States and/or State. In addition, future projects would comply with requirements of the South San Francisco Zoning Ordinance and the General Plan Update policies and actions related to the protection of these biological resources. Lastly, future development would be required to implement MM BIO-3 to assess potential wetland impacts. Implementation of these regulations, policies, actions, and MM BIO-3 would have both direct and indirect beneficial effects on wetlands and waters of the United States and/or State by emphasizing avoidance, minimization, and mitigation of impacts, including finding that there is "no net loss" of wetlands or other adverse effects on wetlands through hydromodification, filling, diversion, or change in water quality before approving development permits. Therefore, with mandatory regulatory compliance and implementation of MM BIO-3, future development projects would not result in significant adverse effects to federally protected wetlands, waters of the United States, or waters of the State, and impacts would be considered less than significant with mitigation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM BIO-3 Assess Potential Wetland Impacts

Applicants or sponsors of projects on sites where potential jurisdictional wetlands or waterways are present shall retain a qualified Biologist/wetland regulatory specialist to conduct a site investigation and assess whether wetland or waterway features are jurisdictional with regard to the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or California Department of Fish and Wildlife (CDFW). This investigation shall include assessing potential impacts to wetlands and other waters of the United States and/or State. If a feature is found to be jurisdictional or potentially jurisdictional, the project applicant or sponsor shall comply with the appropriate permitting process with each agency claiming

jurisdiction prior to disturbance of the feature, and a qualified Biologist/wetland regulatory specialist shall conduct a detailed wetland delineation if necessary.

Level of Significance After Mitigation

Less than significant impact.

Fish and Wildlife Movement Corridors

Impact BIO-4: The proposed project could 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 wildlife nursery sites.

As described in the Environmental Setting section, the San Francisco Bay provides essential natural resources for migratory birds on the Pacific Flyway. Pockets of parks and open space within the City provide space for wildlife and Colma Creek, San Bruno Creek, and Navigable Slough of San Bruno Creek provide connections between these open areas (Exhibit 3.3-3). The City's urban forest canopy can support the movement of a variety of migratory bird species, while creeks and drainages typically serve as movement corridors for wildlife.

Future development under the proposed project would comply with adopted State, federal, and local regulations for the protection of biological resources. Future projects would also comply with requirements of the South San Francisco Municipal Code and Zoning Ordinance and the General Plan Update policies and actions related to biological resources. In addition, MM BIO-1, which requires that focused surveys be conducted to determine whether special-status species, nesting birds, or migratory birds occur on a given project site, and that potential impacts to special-status species be avoided and minimized, would also protect wildlife movement corridors. MM BIO-3, which requires that a site investigation and assessment be conducted for projects on sites where potential jurisdictional wetlands or waterways are present, and compliance with the appropriate permitting process with each agency claiming jurisdiction prior to disturbance of the feature, would also protect wildlife movement corridors. Therefore, future development under the proposed project would not result in significant adverse effects to wildlife corridors or native wildlife nursery sites, and impacts would be considered less than significant with mitigation under this criterion.

Many of the policies and actions already discussed above have both direct and indirect benefits of protecting movement habitat for wildlife. Specific to wildlife corridors, Policy ES-1.1 requires the City to continue to develop a system of well-connected parks and open spaces to support biodiversity, enable the movement of wildlife, and increase climate resilience. Policy ES-1.2 requires the City to strive for habitat diversity ranging from coastal wetlands and marshes to upland habitats. Policy ES-1.3 requires the City to transform Colma Creek, implement the City's Urban Forest Master Plan, and manage the Bay Trail and Centennial Way to create a connected network of wildlife corridors. Policy ES-1.4 discourages the use of invasive, non-native plantings in landscape areas across the City, working with regional agencies and local nurseries to educate residents and employers in removing non-native plant species and instead using native species. Policy ES-2.1 requires the City to protect and expand existing marsh and wetland habitat to improve water quality, adapt to climate change, and provide habitat for wildlife. Action ES-2.2.1 requires the City to develop a bird safe design ordinance to minimize the adverse effects on native and migratory birds and require new

development East of 101 to incorporate design measures. Policy ES-3.1 requires the City to enhance Colma Creek as an ecological corridor, restoring creek ecologies and creating transitional habitat zones to build resilience and ecosystem services. Implementation of these policies and actions, as well as MMs BIO-1 and BIO-3, therefore, would have both direct and indirect beneficial effects for protecting regional wildlife linkages and facilitating wildlife movement.

In conclusion, development facilitated by the proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites and impacts would be less than significant with mitigation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MMs BIO-1 and BIO-3.

Level of Significance After Mitigation

Less than significant impact.

Local Biological Resources Policies/Ordinances Consistency

Impact BIO-5:	**The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.**

Future discretionary projects facilitated by the proposed project would be subject to all applicable local policies and regulations related to the protection of important biological resources. Specifically, development would be required to comply with the City's Tree Ordinance.

Chapter 13.28 of the South San Francisco Municipal Code outlines the City's Street Tree Preservation Policy which regulates street trees and other trees located on City property. Section 13.28.110 (Construction areas) requires a tree removal permit for any construction activities on or adjacent to public property that requires removal of a tree planted on the property. As a condition of permit issuance, the applicant shall be required to replace the tree with one of the same size and species in a location designated by the director. Chapter 13.30 (Tree Preservation) provides standards and requirements for the protection of certain large trees and trees with unique characteristics; provides standards and requirements for planting and maintenance of trees for new development; and establishes recommended standards for planting and maintaining trees on property that is already developed. Section 20.170.003 (Habitat and Biological Resource Conservation Areas) (existing) of the South San Francisco Zoning Ordinance requires a site-specific assessment of biological resources for all development proposals in areas of the Special ES Overlay District that have been identified as ecologically sensitive habitat. Additionally, General Plan Update Policy ES-4.1 requires the City to expand the tree canopy cover to increase environmental benefits, prioritizing disadvantaged communities and connected wildlife corridors. Action ES-4.1.1 requires the City to implement the City's Urban Forest Plan. Policy ES-4.2 requires the avoidance of tree removal whenever possible,

and when removals are warranted, that each removed tree be replaced with three new trees. Future development under the proposed project would be subject to these mandatory tree preservation requirements.

Therefore, development facilitated by the proposed project would not conflict with local policies or ordinances protecting biological resources, and impacts would be less than significant.

Level of Significance

Less than significant impact.

Habitat/Natural Community Conservation Plan Consistency

Impact BIO-6:	**The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan.**

South San Francisco contains two areas set aside as habitat for the conservation of threatened and endangered species, Sign Hill Park and San Bruno Mountain State Park, the latter of which is governed by the San Bruno Mountain HCP and the San Bruno Mountain HMP. The BCDC has jurisdiction over all areas of San Francisco Bay that are subject to tidal action. Tidal action is defined as any area by the shoreline that extends up to mean high water, except in marsh areas, where BCDC's jurisdiction extends to five feet above mean sea level. The BCDC also has "shoreline band" jurisdiction over an area 100 feet wide inland and parallel to the shoreline. For projects within BCDC jurisdiction, permits may be required depending on the nature of the activity. Those projects requiring a permit must comply with the requirements of the McAteer-Petris Act and the San Francisco Bay Plan.

Subsequent development under the proposed project within or adjacent to Sign Hill Park, San Bruno Mountain State Park, or the San Francisco Bay could result in direct or indirect effects on sensitive habitats within the Planning Area. Subsequent development under the proposed project located within sensitive habitats or areas within the City must complete a site-specific assessment of biological resources as part of the development review process as described in Policy ES-6.3. The City’s environmental review process would be utilized to impose appropriate mitigation measures on development to reduce impacts on sensitive habitats and special-status species (per Policy ES-6-3). Policy ES-6.2 requires wildlife and plant assessments for new development in areas that could impact threatened or endangered species. Future projects that border San Francisco Bay and lie within BCDC jurisdiction may require a permit and must comply with the requirements of the McAteer-Petris Act and the San Francisco Bay Plan. Therefore, potential conflicts San Bruno Mountain HCP, San Bruno Mountain HMP, and the San Francisco Bay Plan would be reduced to less than significant levels.

There are no other local, regional, or State HCPs that are applicable to the South San Francisco Planning Area. As such, implementation of the proposed project would not conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or State HCP. Impacts would be less than significant relative to this topic.

Level of Significance

Less than significant impact.

3.3.7 - Cumulative Impacts

The geographical scope of the cumulative impact analysis for Biological Resources is the South San Francisco Planning Area as well as the surrounding cities of Brisbane, Daly City, Pacifica, San Bruno, and Millbrae. This analysis evaluates whether the impacts of the proposed project, together with the impacts of cumulative development, would result in a cumulatively significant impact on special-status species; wetlands and other waters of the United States and/or State; or other biological resources protected by federal, State, or local regulations or policies. This analysis then considers whether incremental contribution to cumulative impacts associated with the implementation of the proposed project would be significant. Both conditions must apply for a project's cumulative effects to rise to the level of significance.

Special-status Species

A majority of the City of South San Francisco and the surrounding region is highly urbanized and developed and contains little suitable habitat for special-status species aside from a few areas including Sign Hill Park, San Bruno Mountain State Park as well as the remaining pockets of saltmarsh habitat along San Francisco Bay. Future development within the cumulative geographic context could have significant cumulative impacts on special-status species if development is allowed to encroach in these areas. However, development of future projects within the cumulative geographic context, would be required to comply with federal, State, and local laws and policies and all applicable permitting requirements of the regulatory and oversight agencies intended to address potential impacts on biological resources. Because cumulative development would be required to comply with the above oversight and requirements, as well as the overall land use vision, design review regulations and policies in local and regional plans, cumulative biological impacts would be less than significant.

Moreover, the proposed project's incremental contribution to these less than significant cumulative impacts would not be significant with implementation of the policies and actions proposed in the General Plan Update in addition to MM BIO-1 analyzed above. General Plan Update Policy ES-6.2 requires wildlife and plant assessments for new development in areas that could impact threatened or endangered species. Policy ES-6.3 requires that permit applications for projects located within ecologically sensitive habitat areas prepare site-specific biological assessments for review and approval by City Planning staff, and incorporation of the recommended measures during construction to protect ecologically sensitive habitat areas, such as establishing buffers, incorporating erosion control measures, or re-seeding with native plant species. MM BIO-1 requires that focused surveys be conducted to determine whether special-status species, nesting birds, or migratory birds occur on a given project site, and that potential impacts to special-status species be avoided and minimized, and that any losses be fully compensated on-site or at a habitat mitigation bank.

Other municipalities within the cumulative geographic context have adopted similar policies to ensure that development within the region will not adversely affect special-status species found in

the region. Future development within the cumulative geographical context would also be required to comply with the various federal and State laws and regulations that protect special-status plant and animal species, including the Endangered Species Act and CESA. Therefore, implementation of the proposed project would not result in a considerable incremental contribution to cumulative impacts to biological resources, because the cumulative geographic scope is largely built out. In addition, the General Plan Update contains policies and actions to protect special-status species, and future development within the cumulative geographic context would be required to comply with regulations set forth by local, State, and federal agencies to protect biological resources. Therefore, the proposed project's contribution to cumulative impacts would be less than significant.

Sensitive Natural Communities or Riparian Habitat

The geographic scope for analyzing potential impacts to sensitive natural communities and riparian habitat includes the following sensitive natural communities known to occur within 10 miles of the Planning Area: Northern Coastal Salt Marsh, Northern Maritime Chaparral, Serpentine Bunchgrass, and Valley Needlegrass Grassland. In addition, Colma Creek, San Bruno Creek, Navigable Slough of San Bruno Creek, Sign Hill Park, San Bruno Mountain State Park, and the tidal marsh mudflats, ponds, and open water in San Francisco Bay are considered ecologically sensitive areas. Future development within the cumulative geographic scope could have significant cumulative impacts on sensitive natural communities or riparian habitat if development is allowed to encroach in these areas. However, development within the cumulative geographic context would be required to comply with federal, State, and local laws and policies and all applicable permitting requirements of the regulatory and oversight agencies intended to address potential impacts on biological resources. Because cumulative development would be required to comply with the above oversight and requirements, as well as the overall land use vision, design review regulations and policies in local and regional plans, cumulative biological impacts would be less than significant.

Moreover, the proposed project's incremental contribution to these less than significant cumulative impacts would not be significant with implementation of the policies and actions proposed in the General Plan Update. As analyzed above, to protect sensitive habitat areas, General Plan Update Policy ES-2.2 requires the City to establish standards and guidelines for new construction within 150 feet of San Francisco Bay and Policy ES-3.3 requires the City to maintain development standards and guidelines for new construction within 80 feet of Colma Creek. Policy ES-6.3 requires that permit applications for projects located within ecologically sensitive habitat areas prepare site-specific biological assessments for review and approval by City Planning staff, and incorporation of the recommended measures during construction to protect ecologically sensitive habitat areas.

Other municipalities within the cumulative geographic context have adopted similar policies to ensure that development within the region will not adversely affect sensitive natural communities or riparian habitat found in the region. Future development within the cumulative geographic scope would also be required to obtain a "Streambed Alteration Agreement" from CDFW prior to any alteration of a lakebed, stream channel, or their banks. Therefore, cumulative impacts from implementation of the proposed project would not result in a considerable incremental contribution to cumulative impacts to sensitive natural communities or riparian habitat, because the cumulative geographic scope is largely built out. In addition, the General Plan Update contains policies and

actions to protect habitat, and future development within the cumulative geographic context would be required to comply with regulations set forth by local, State, and federal agencies to protect biological resources. Therefore, the proposed project's contribution to cumulative impacts would be less than significant.

Waters of the United States

Future development within the cumulative geographic scope could have significant cumulative impacts on jurisdictional waters and wetlands including the Bay saltmarshes present along San Francisco Bay which border the City as well as jurisdictional waters found within the city limits including Colma Creek and San Bruno Creek. However, development within the cumulative geographic context would be required to comply with federal, State, and local laws and policies and all applicable permitting requirements of the regulatory and oversight agencies intended to address potential impacts on biological resources. Because cumulative development would be required to comply with the above oversight and requirements, as well as the overall land use vision, design review regulations and policies in local and regional plans, cumulative biological impacts would be less than significant.

Moreover, the proposed project's incremental contribution to these less than significant cumulative impacts would not be significant with implementation of the policies and actions proposed in the General Plan Update, as well as MM BIO-3. As analyzed above, to protect jurisdictional features, General Plan Update Policy ES-2.2 requires the City to maintain standards and guidelines for new construction within 150 feet of San Francisco Bay and Policy ES-3.3 requires the City to maintain development standards and guidelines for new construction within 80 feet of Colma Creek. Policy ES-7.1 requires the City to partner with regional and local agencies to develop a comprehensive watershed management strategy that identifies programs, partnerships, actions, and incentives that the City and partners can take to protect the City's water resources and aquatic areas. MM BIO-3 requires that a qualified Biologist/wetland regulatory specialist conduct a site investigation and assessment for projects on sites where potential jurisdictional wetlands or waterways are present. MM BIO-3 further requires that if a feature is found to be jurisdictional or potentially jurisdictional, that the applicant shall comply with the appropriate permitting process with each agency claiming jurisdiction prior to disturbance of the feature.

Other municipalities within the cumulative geographic context have adopted similar policies to preserve existing jurisdictional features. Future development within the cumulative geographic scope would also be required to obtain permits from the USACE and RWQCB for any development that involves disturbance to a wetland or waters of the United States and/or State to ensure that there is "no net loss" of wetlands or jurisdictional waters. If, through the design process, it is determined that a future development project cannot avoid a wetland or jurisdictional water, then the USACE and/or RWQCB would require that there be an equal amount of wetland created elsewhere to mitigate any loss of wetland. Therefore, cumulative impacts from implementation of the proposed project would not result in a considerable incremental contribution to cumulative impacts to wetlands or jurisdictional waters, because the cumulative geographic scope is largely built out. In addition, the General Plan Update contain policies and actions to protect habitat, and future development within the cumulative geographic context would be required to comply with

regulations set forth by local, State, and federal agencies to protect biological resources. Therefore, the proposed project's contribution to cumulative impacts would be less than significant.

Fish and Wildlife Movement Corridors

Future development within the cumulative geographic scope would not substantially interfere with the movement of any fish or wildlife species because development would be required to comply with federal, State, and local laws and policies and all applicable permitting requirements of the regulatory and oversight agencies intended to address potential impacts on fish and wildlife movement corridors. Because cumulative development would be required to comply with the above oversight and requirements, as well as the overall land use vision, design review regulations and policies in local and regional plans, cumulative impacts would be less than significant.

Moreover, the proposed project's incremental contribution to these less than significant cumulative impacts would not be significant with implementation of the policies and actions proposed in the General Plan Update as well as MMs BIO-1 and BIO-3. As analyzed above, General Plan Update Policies ES-1.1, ES-1.2, ES-1.3, ES-1.4, ES-2.1, ES-3.1, and ES-6.3 would ensure that habitats important to migratory wildlife such as creeks, parks, open space, saltmarshes, and the San Francisco Bay would not be adversely impacted without adequate mitigation measures put in place to off-set any potential impacts that may result from future development.

Other municipalities within the cumulative geographic scope have adopted similar policies to preserve habitats that are crucial for migratory wildlife. Therefore, cumulative impacts from implementation of the proposed project would not result in a considerable incremental contribution to cumulative impacts to fish or wildlife movement corridors, because the cumulative geographic scope is largely built out. In addition, the General Plan Update contains policies and actions to protect fish and wildlife movement corridors, and future development within the cumulative geographic context would be required to comply with regulations set forth by local, State, and federal agencies to protect biological resources. Therefore, the proposed project's contribution to cumulative impacts would be less than significant.

Local Policies or Ordinances

Future development within the cumulative geographic context would be required to comply with local laws and policies and all applicable permitting requirements of the regulatory and oversight agencies intended to address potential impacts on biological resources. Because cumulative development would be required to comply with the overall land use vision, design review regulations and policies in local and regional plans, cumulative impacts would be less than significant.

Moreover, the proposed project's incremental contribution to these less than significant cumulative impacts would not be significant with implementation of the policies and actions proposed in the General Plan Update. As analyzed above, Chapter 13.28 of the South San Francisco Municipal Code outlines the City's Street Tree Preservation Policy which regulates street trees and other trees located on City property. Section 20.170.003 (Habitat and Biological Resource Conservation Areas) (existing) of the South San Francisco Zoning Ordinance requires a site-specific assessment of

biological resources for all development proposals in areas of the Special ES Overlay District that have been identified as ecologically sensitive habitat (such as Sign Hill Park, San Bruno Mountain State Park, and the saltmarshes along San Francisco Bay). Additionally, General Plan Update Policy ES-4.1 requires the City to expand the tree canopy cover to increase environmental benefits, prioritizing disadvantaged communities and connected wildlife corridors and Action ES-4.1.1 requires the City to implement the City's Urban Forest Plan. Policy ES-4.2 requires the avoidance of tree removal whenever possible, and when removals are warranted, that each removed tree be replaced with three new trees. All development facilitated by the proposed project would be subject to these mandatory requirements to preserve trees and other sensitive habitat.

Other municipalities within the cumulative geographic scope have adopted similar policies to encourage the preservation of trees and other sensitive habitat. Therefore, cumulative impacts from implementation of the proposed project would not result in a considerable incremental contribution to cumulative impacts to local policies or ordinances, because the cumulative geographic scope is largely built out. In addition, the General Plan Update contains policies and actions to protect biological resources, and future development within the cumulative geographic context would be required to comply with regulations set forth by local, State, and federal agencies. Therefore, the proposed project's contribution to cumulative impacts would be less than significant.

Habitat and Natural Community Conservation Plan Consistency

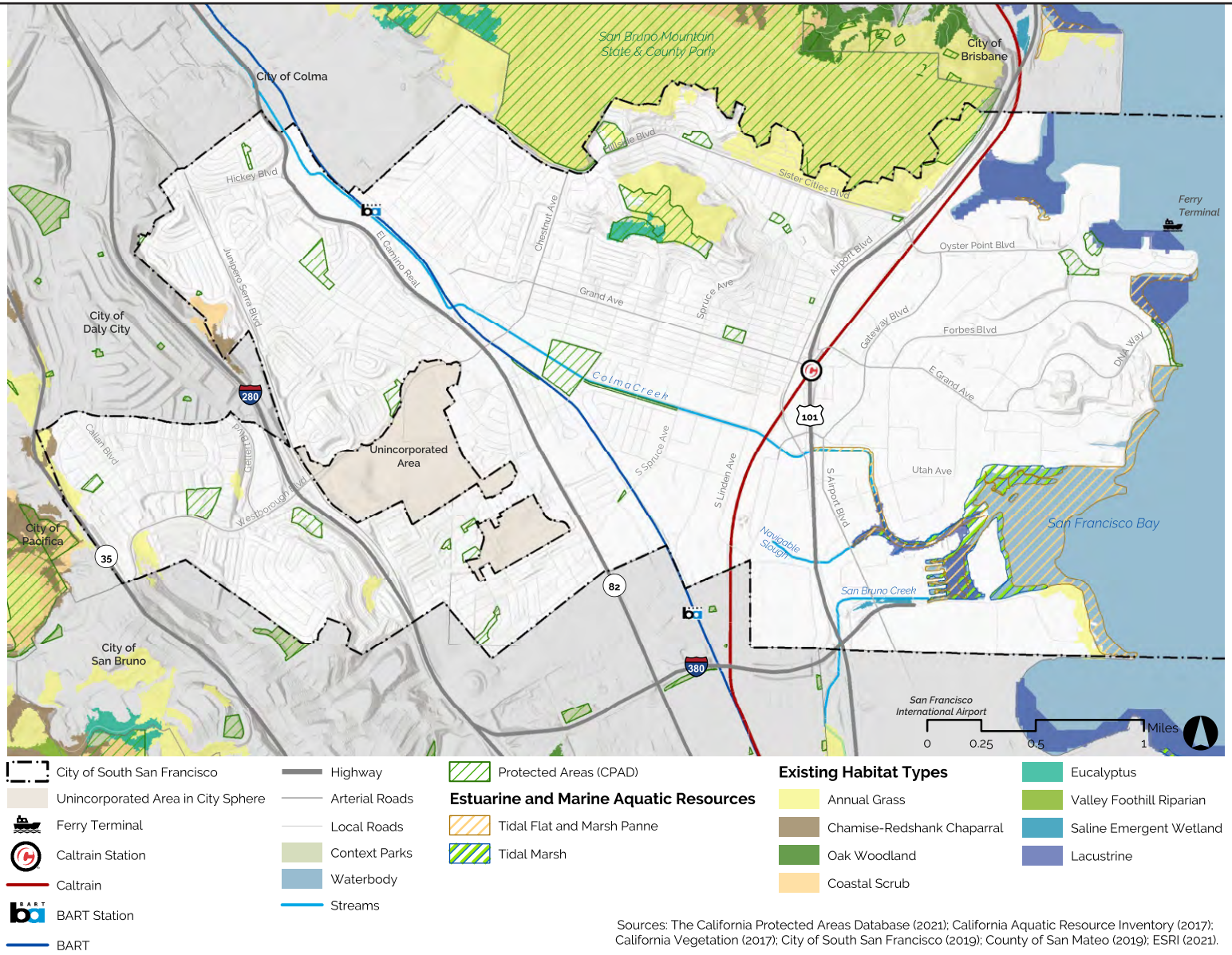
South San Francisco contains two areas set aside as habitat for the conservation of threatened and endangered species, Sign Hill Park and San Bruno Mountain State Park, the latter of which is governed by the San Bruno Mountain HCP and the San Bruno Mountain HMP. The BCDC has jurisdiction over all areas of San Francisco Bay that are subject to tidal action. Future development within the cumulative geographic scope would not substantially conflict with the San Bruno Mountain HCP, San Bruno Mountain HMP, and the San Francisco Bay Plan because development would be required to comply with federal, State, and local laws and policies and all applicable permitting requirements of the regulatory and oversight agencies intended to address potential conflicts with these plans. Because cumulative development would be required to comply with the above oversight and requirements, as well as the overall land use vision, design review regulations and policies in local and regional plans, cumulative impacts would be less than significant.

Moreover, the proposed project's incremental contribution to these less than significant cumulative impacts would not be significant with implementation of the policies and actions proposed in the General Plan Update. As analyzed above, the City must complete a site-specific assessment of biological resources as part of the development review process as described in Policy ES-6.3. The City's environmental review process would be utilized to impose appropriate mitigation measures on development to reduce impacts on sensitive habitats and special-status species (per Policy ES-6.3). Future projects within the cumulative geographic scope that lie within BCDC jurisdiction may require a permit and must comply with the requirements of the McAteer-Petris Act and the San Francisco Bay Plan. Other municipalities within the cumulative geographic context have adopted similar policies to encourage the preservation of sensitive habitat and special-status species, and would similarly be required to obtain permits for development within areas under the jurisdiction of the BCDC. Therefore, cumulative impacts from implementation of the proposed project would not result

in a considerable incremental contribution to cumulative impacts related to conflicts with the San Bruno Mountain HCP, San Bruno Mountain HMP, and the San Francisco Bay Plan, because the cumulative geographic scope is largely built out. In addition, the General Plan Update contains policies and actions to protect sensitive habitat, and future development within the cumulative geographic context would be required to comply with regulations set forth by local, State, and federal agencies to protect biological resources. Therefore, the proposed project's contribution to cumulative impacts would be less than significant.

Level of Cumulative Significance

Less than significant impact.



Source: City of South San Francisco General Plan Update

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Exhibit 3.3-1
Existing Habitat Types and Protected Areas

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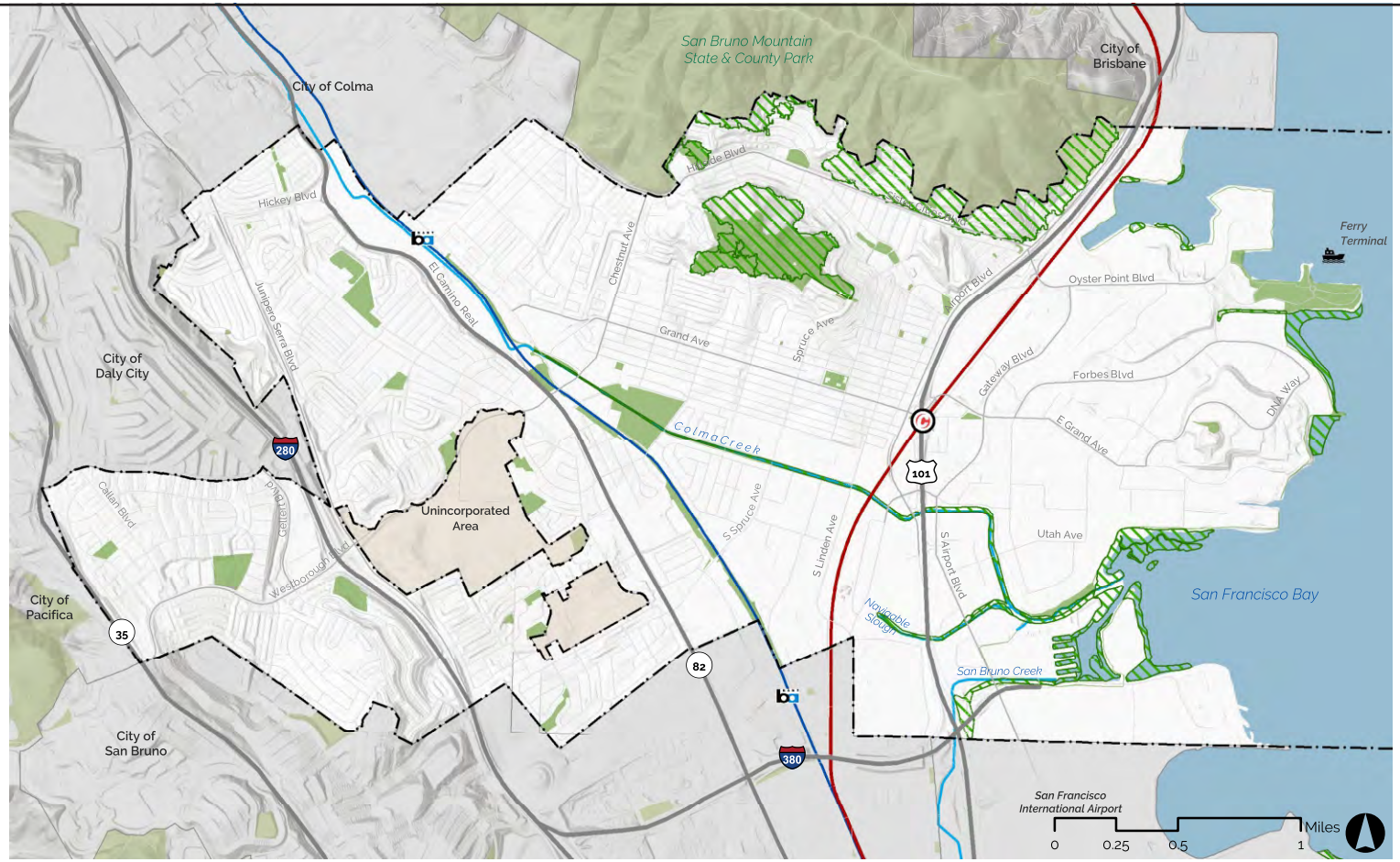

Sources: City of South San Francisco (2019); County of San Mateo (2019); ESRI (2021).

Source: City of South San Francisco General Plan Update

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Exhibit 3.3-2
Ecologically Sensitive Areas

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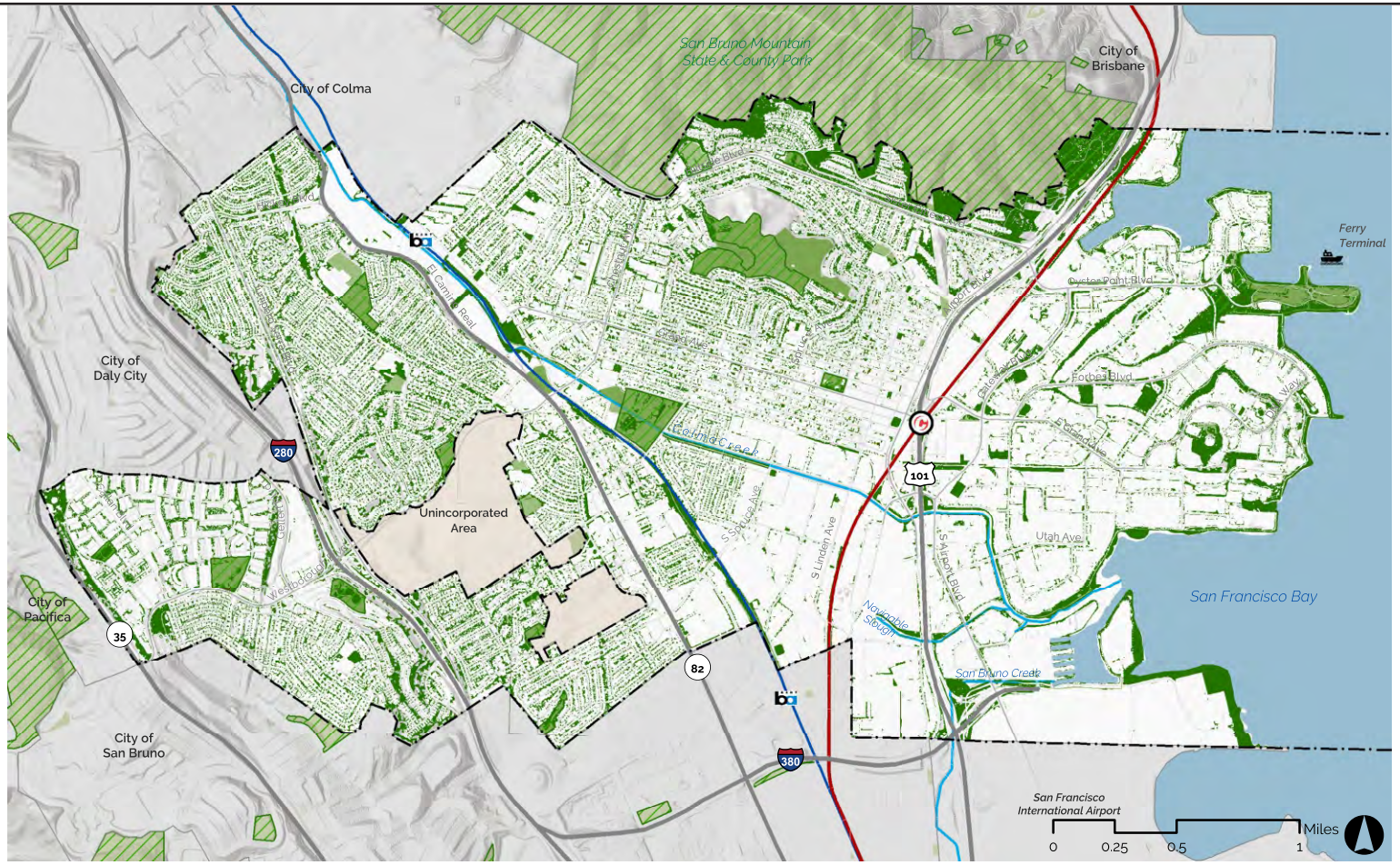

Sources: The California Protected Areas Database (2021); City of South San Francisco (2019); County of San Mateo (2019); ESRI (2021).

Source: City of South San Francisco General Plan Update

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Exhibit 3.3-3
Potential Connectivity for Wildlife Species

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3.4 - Cultural Resources and Tribal Cultural Resources

3.4.1 - Introduction

This section of the Draft Program Environmental Impact Report (Draft Program EIR) describes the existing cultural resources setting and the potential impacts related to cultural resources within the South San Francisco General Plan Update Planning Area (Planning Area) resulting from implementation of the General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project). Future discretionary projects facilitated by the proposed project would be evaluated for project-specific impacts to cultural and Tribal Cultural Resources (TCRs) at the time they are proposed.

Cultural resources refer broadly to prehistoric and historic buildings, structures, objects, sites, and districts exhibiting important historical, cultural, scientific, or technological associations and which exhibit historic integrity.[1] This definition extends to TCRs, which refer to sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe.

The following is a summary of comments related to Cultural and Tribal Cultural Resources that were received in response to the Notice of Preparation (NOP). The comment letters are included in Appendix A.

- Recommends consultation with California Native American tribes traditionally and culturally affiliated with the geographic area of the proposed project.
- Outlines Assembly Bill (AB) 52 and Senate Bill (SB) 18 tribal consultation provisions.
- Provides recommendations for Cultural Resources Assessments.

The descriptions and analysis in this section are based, in part, on statements, data, and figures provided by the following reference materials:

- South San Francisco General Plan Update.
- South San Francisco Municipal Code.
- Office of Historic Preservation Directory of Properties in the Historic Property Data File for San Mateo County.
- Northwest Information Center records search for the Planning Area.
- The National Register of Historic Places.
- The California Register of Historical Resources.
- The California Historical Landmarks List.

[1] To retain historic integrity a property will always possess several, and usually most, of the seven aspects of integrity. The retention of specific aspects of integrity is paramount for a property to convey its significance. Determining which of these aspects are most important to a particular property requires knowing why, where, and when the property is significant. The seven aspects of integrity include location, design, setting, materials, workmanship, feeling, and association.

- The California Points of Historical Interest List.
- City of South San Francisco Historic Resources Inventory List.
- South San Francisco General Plan Update, Cultural and Historic Resources Existing Conditions Report, December 2019.
- South San Francisco Historic Resources Survey, Daley & Associates, June 2022.

Appendix D contains supporting information for this section, including the Cultural and Historic Resources Existing Conditions Report, South San Francisco Historic Resources Survey, Native American Heritage Commission (NAHC) Sacred Lands File Search results, and copies of letters sent to Native American tribes pursuant to SB 18.

3.4.2 - Environmental Setting

Cultural Resources Components

The term "cultural resources" encompasses historic resources, archaeological resources, and burial sites, which are generally defined as follows:

- **Historic Resources:** Historic resources are associated with the recent past. In California, historic resources are typically associated with the Spanish, Mexican, and American periods in the State's history and are generally less than 200 years old. Historic resources often take the form of buildings, structures, and other elements of the built environment.
- **Archaeological Resources:** Archaeology is the study of artifacts and material culture with the aim of understanding human activities and cultures in the past. Archaeological resources may be associated with prehistoric indigenous cultures as well as historic periods.
- **Tribal Cultural Resources:** TCRs include sites, features, places, or objects that are of cultural value to one or more California Native American Tribe.
- **Burial Sites, Cemeteries, and Native American Burial Sites:** Burial sites and cemeteries are formal or informal locations where human remains have been interred and that are of cultural value to one or more California Native American Tribe.

More specifically, cultural resources may be understood as resources that have been formally recognized by a lead agency and/or are listed or determined eligible for listing on the California Register of Historical Resources (CRHR) (Public Resources Code [PRC] § 5024.1, Title 14 California Code of Regulations [CCR] § 4852). It is notable that, the fact that a resource is not yet identified as a historical resource or found eligible for the CRHR does not preclude a lead agency from determining that said resource is a historical resource pursuant to Public Resources Code Sections 5020.1(j) or 5024.1. Under the California Environmental Quality Act (CEQA), a substantial adverse change in the significance of a historical resource would constitute a significant effect on the environment.

Overall Cultural Resources Setting

Following is an overview of the prehistory, ethnography, and historic background, providing a context in which to understand the background and relevance of sites and structures found in the

Planning Area. This section is not intended to be a comprehensive review of the current resources available; rather, it serves as a general overview. Further details can be found in ethnographic studies, mission records, and major published sources.[2,3,4,5,6,7]

Prehistoric Setting

The San Francisco Bay Area supported a dense population of hunter-gatherers over thousands of years, leaving a rich and varied archaeological record. The Bay Area was a place of incredible language diversity, with at least seven languages spoken at the time of Spanish settlement in 1776. The diverse ecosystem of the bay and surrounding lands supported an average of three to five persons per square mile but reached 11 persons per square mile in the North Bay. At the time of Spanish contact, the people of the Bay Area were organized into local tribelets that defended fixed territories under independent leaders. Typically, individual Bay Area tribelets included 200 to 400 people distributed among three to five semi-permanent villages, within territories measuring approximately 10 to 12 miles in diameter.

Archaeological investigations in Northern California have documented human occupation and activity dating from 9,000 to 11,500 years ago. Early Archaeologists in the San Francisco Bay Area concentrated on recording and excavating large coastal shell mounds, including the Emeryville Shellmound (CA-ALA-309) and the Ellis Landing Site (CA-CCO-295). They discovered deeply buried stratified sites with numerous burials and associated funerary objects. The data they recovered would later help other Archaeologists to develop chronological and cultural frameworks to define the region's archaeological sites and to understand the complex movements and interactions of the indigenous people in this region.[8]

Early archaeological investigations in Central California were conducted at sites located in the Sacramento- San Joaquin Delta region. The first published account documents investigations in the Lodi and Stockton area. The initial archaeological reports typically contained descriptive narratives with more systematic approaches sponsored by Sacramento Junior College in the 1930s. At the same time, University of California at Berkeley excavated several sites in the lower Sacramento Valley and Delta region, which resulted in recognizing archaeological site patterns based on a variation of inter-site assemblages. Research during the 1930s identified temporal periods in Central California prehistory and provided an initial chronological sequence. In 1939, researcher Jeremiah Lillard of Sacramento Junior College noted that each cultural period led directly to the next and that influences spread from the Delta region to other regions in Central California.[9] In the late 1940s and early 1950s, researcher Richard Beardsley of the University of California Berkeley documented similarities in artifacts among sites in the San Francisco Bay region and the Delta and refined his findings into a cultural model that ultimately became known as the Central California Taxonomic

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2 Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, D.C.: Smithsonian Institution.
3 Beardsley, R.K. 1948. "Cultural Sequences in Central California Archaeology." American Antiquity 14:1-28.
4 Bennyhoff, J. 1950. Californian Fish Spears and Harpoons. Berkeley: University of California Anthropological Records 9(4):295-338.
5 Chartkoff J.L. and K.K. Chartkoff. 1984. The Archaeology of California. Menlo Park: Stanford University Press.
6 Moratto, M.J. 1984. California Archaeology. San Diego: Academic Press.
7 Jones, T.L. and Kathryn A. Klar. 2007. California Prehistory. Lanham: AltaMira Press; Rowman & Littlefield Publishers, Inc.
8 Moratto, M.J. 1984. California Archaeology. San Diego: Academic Press.
9 Lillard, J.B. and W.K. Purves. 1936. The Archaeology of the Deer Creek-Cosumnes Area, Sacramento Co., California. Sacramento. Sacramento Junior College, Department of Anthropology Bulletin 1.

System (CCTS). This system proposed a uniform, linear sequence of cultural succession separated in into an Early, Middle, and Late Horizon.[10]

To address some of the flaws in the CCTS system, D.A. Fredrickson introduced a revision that incorporated a system of spatial and cultural integrative units.[11] Fredrickson separated cultural, temporal, and spatial units from each other and assigned them to six chronological periods: Paleo-Indian (12,000 to 8000 Before Present [BP]); Lower, Middle and Upper Archaic (8000 to 1500 BP), and Emergent (Upper and Lower, 1500 to 250 BP). The suggested temporal ranges are similar temporally to Beardsley's horizons, which are broad cultural units that can be arranged in a temporal sequence. In addition, Fredrickson defined several patterns–a general way of life shared within a specific geographical region. These patterns include:

- Windmiller Pattern or Early Horizon (4500 to 3500 BP)
- Berkeley Pattern or Middle Horizon (3500 to 1500 BP)
- Augustine Pattern or Late Horizon (1500 to 250 BP)

Brief descriptions of these temporal ranges and their unique characteristics follow.

Windmiller Pattern or Early Horizon (4500 to 3500 BP)

Characterized by the Windmiller Pattern, the Early Horizon was centered in the Cosumnes district of the Delta and emphasized hunting rather than gathering, as evidenced by the abundance of projectile points in relation to plant processing tools. Additionally, atlatl, dart, and spear technologies typically included stemmed projectile points of slate and chert but minimal obsidian. The large variety of projectile point types and faunal remains suggests exploitation of numerous types of terrestrial and aquatic species.[12] Burials occurred in cemeteries and intra-village graves. These burials typically were ventrally extended, although some dorsal extensions are known with a westerly orientation and a high number of grave goods. Trade networks focused on acquisition of ornamental and ceremonial objects in finished form rather than on raw material. The presence of artifacts made of exotic materials such as quartz, obsidian, and shell indicate an extensive trade network that may represent the arrival of Utian populations into Central California. Also indicative of this period are rectangular Haliotis and Olivella shell beads, and charmstones that usually were perforated.[13]

Berkeley Pattern or Middle Horizon (3500 to 1500 BP)

The Middle Horizon is characterized by the Berkeley Pattern, which displays considerable changes from the Early Horizon. This period exhibited a strong milling technology represented by minimally shaped cobble mortars and pestles, although metates and manos were still used. Dart and atlatl technologies during this period were characterized by non-stemmed projectile points made primarily of obsidian. Fredrickson suggests that the Berkeley Pattern marked the eastward expansion of Miwok groups from the San Francisco Bay Area. Compared with the Early Horizon, there is a higher

[10] Beardsley, R.K. 1948. Cultural Sequences in Central California Archaeology. American Antiquity.
[11] Frederickson, D.A. 1973. Early Cultures of the North Coast Ranges, California. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Davis.
[12] Bennyhoff, J. 1950. Californian Fish Spears and Harpoons. University of California Anthropological Records.
[13] Ragir, S.R. 1972. The Early Horizon in Central California Prehistory. Contributions of the University of California Archaeological Research Facility 15. Berkeley, CA.

proportion of grinding implements at this time, implying an emphasis on plant resources rather than on hunting. Typical burials occurred within the village with flexed positions, variable cardinal orientation, and some cremations. As noted by Lillard, Heizer, and Fenenga, the practice of spreading ground ochre over the burial was common at this time. Grave goods during this period are generally sparse and typically include only utilitarian items and a few ornamental objects. However, objects such as charmstones, quartz crystals, and bone whistles occasionally were present, which suggest the religious or ceremonial significance of the individual.[14] During this period, larger populations are suggested by the number and depth of sites compared with the Windmiller Pattern. According to Fredrickson, the Berkeley Pattern reflects gradual expansion or assimilation of different populations rather than sudden population replacement and a gradual shift in economic emphasis.[15]

Augustine Pattern or Late Horizon (1500 to 250 BP)

The Late Horizon is characterized by the Augustine Pattern, which represents a shift in the general subsistence pattern. Changes include the introduction of bow and arrow technology; and most importantly, acorns became the predominant food resource. Trade systems expanded to include raw resources as well as finished products. There are more baked clay artifacts and extensive use of Haliotis ornaments of many elaborate shapes and forms. According to Moratto, burial patterns retained the use of flexed burials with variable orientation, but there was a reduction in the use of ochre and widespread evidence of cremation.[16] Judging from the number and types of grave goods associated with the two types of burials, cremation seems to have been reserved for individuals of higher status, whereas other individuals were buried in flexed positions. Johnson suggests that the Augustine Pattern represents expansion of the Wintuan population from the north, which resulted in combining new traits with those established during the Berkeley Pattern.[17]

Bay Area archaeological research has expanded from an emphasis on defining chronological and cultural units to a more comprehensive look at settlement and subsistence systems. This shift is illustrated by the early use of burials to identify mortuary assemblages and more recent research using osteological data to determine the health of prehistoric populations. Although debate continues over a single model or sequence for California, the general framework consisting of three temporal/cultural units is generally accepted, although the identification of regional and local variation is a major goal of current archaeological research.

Ethnographic Setting

The Ramaytush Ohlone

At the time of European contact, the South San Francisco area was occupied by various tribelets that were part of the Ohlone (called by the Spaniards “Coastanoans,” or Coast-dwellers) tribe of California Native Americans. Evidence of this group of hunter-gatherers exists from as early as 5,600 BP. The Ohlone group designates a language family consisting of eight branches of the Ohlone language that are considered too distinct to be dialects, with each being related to its geographically

[14] Lillard, J.B., R.F. Heizer, and F. Fenenga. 1939. An Introduction to the Archaeology of Central California. Sacramento Junior College, Department of Anthropology, Bulletin 2.
[15] Fredrickson, D.A. 1973. Early Cultures of the North Coast of the North Coast Ranges, California. PhD dissertation.
[16] Moratto, M.J. 1984. California Archaeology. San Diego: Academic Press.
[17] Johnson, J.J. 1976. Archaeological Investigations at the Blodgett Site (CA-SAC-267), Sloughhouse Locality, California. Report to the United States National Parks Service, Western Regional Office, Tucson, Arizona.

adjacent neighbors. These groups lived in approximately 50 separate and politically autonomous tribelet areas, each with one or more permanent villages, between the North San Francisco Bay and the lower Salinas River.[18]

The arrival of Ohlone groups into the Bay Area appears to be temporally consistent with the appearance of the Late Period artifact assemblage in the archaeological record, as documented at sites such as the Emeryville Shellmound or the Ellis Landing Shellmound. It is probable that the Ohlone moved south and west from the Delta region of the San Joaquin-Sacramento River into the Bay Area during the Late Prehistoric. The tribal group that most likely occupied the project area was the *Salson* triblet of the Ramaytush group of Ohlones.[19] Native American archaeological sites located in this area of San Mateo County tend to be situated near the historic margin of bay tidal marshland and along creeks that drain upland terrain bordering the Bay shore plain.[20]

The various Ohlone tribes subsisted as hunter-gatherers and relied on local terrestrial and marine flora and fauna for subsistence.[21] The predominant plant food source was the acorn, but they also exploited a wide range of other plants, including various seeds, buckeye, berries, and roots. Protein sources included grizzly bear, elk, sea lions, antelope, and black-tailed deer as well as smaller mammals such as raccoon, brush rabbit, ground squirrels, and wood rats. Waterfowl, including Canadian geese, mallards, green-winged teal, and American widgeon, were captured in nets using decoys to attract them. Fish also played an important role in the Ohlone diet and included steelhead, salmon, and sturgeon.[22]

The Ohlone constructed watercraft from tule reeds and possessed bow and arrow technology. They fashioned blankets from sea otter pelts, fabricated basketry from twined reeds of various types, and assembled a variety of stone and bone tools in their assemblages. Ohlone villages typically consisted of domed dwelling structures, communal sweathouses, dance enclosures, and assembly houses constructed from thatched tule reeds and a combination of wild grasses, wild alfalfa, and ferns.

The Ohlone were politically organized into autonomous tribelets that had distinct cultural territories. Individual tribelets contained one or more villages with a number of seasonal camps for resource procurement within the tribelet territory. The tribelet chief could be either male or female, and the position was inherited patrilineal, but approval of the community was required. The tribelet chief and council were essentially advisors to the community and were responsible for feeding visitors, directing hunting and fishing expeditions, ceremonial activities, and warfare on neighboring tribelets. The Gold Rush brought disease to the native inhabitants decimating the population, and by the 1850s, nearly all of the Ohlone had adapted in some way or another to economies based on cash

[18] Levy, R. 1978. Costanoan. In California, edited by Robert F. Heizer, pp. 485-495. Handbook of North American Indians, Vol. 8. W.G. Sturtevant, general editor, Smithsonian Institution, Washington D.C.
[19] Ibid.
[20] Ibid.
[21] Levy, R. 1978. Costanoan. In California, edited by Robert F. Heizer, pp. 485-495. Handbook of North American Indians, Vol. 8. W.G. Sturtevant, general editor, Smithsonian Institution, Washington D.C.
[22] Jones, T.L. and Kathryn A. Klar. 2007. California Prehistory. Lanham: AltaMira Press; Rowman & Littlefield Publishers, Inc.

income. Hunting and gathering activities continued to decline and were rapidly replaced with economies based on ranching and farming.[23]

Historic Setting

Unless otherwise noted, the information in this section is drawn from the South San Francisco Historic Resources Survey prepared by Daly & Associates, included in Appendix D.

Spanish Mission Period (1769-1821)

Father Junípero Serra arrived in Alta California in 1769 with a military expedition led by Gaspar de Portolá. Portolá and Serra had been tasked by the Spanish King Carlos III to create a chain of missions and mission outposts in Alta California to bring Christianity to the indigenous population and create a foothold for Spanish colonization of the region. This move by Spain was intended to protect their Pacific Coast shipping routes and the coastal region of Alta California from aggression by Russia or Great Britain. Beginning in San Diego, the expedition surveyed the lands as far north as Sonoma to secure sites for future missions and settlements. Mission San Francisco de Assisi was established in 1776, near Arroyo de los Dolores (Dolores Creek), in what is now referred to as the Mission District of the City of San Francisco.

Although what we consider today to be Serra's and Portolá's route through California may not be exact, the road known as El Camino Real generally follows the path used by the Portolá expedition as they made their way north and south through Alta California. The section of the historic path that ran approximately north–south through San Mateo and San Francisco County was simply identified in the 1800s as the San José-San Francisco Road, or the "old mission road." It was along this road, approximately 12 miles south of Mission San Francisco, where a hacienda was built as part of a rancho by a Spanish soldier.

The Mexican Period (1821–1849)

The Mexican Period, 1821 to 1848, was marked by secularization and division of mission lands among the *Californios* as land grants, termed ranchos. After years of internal fighting, Mexico achieved its independence from Spain in 1821, and Alta California became the northern frontier of the State of Mexico. The mission padres were forced to swear allegiance to Mexico in 1822. Secularization of the missions took place over the next decade, and the former mission lands were transferred to the Mexican government. The vast acres of land once owned by the missions were divided into ranchos and were gradually shifted to being under Mexican oversight in the 1830s.

Once the ranchos were secularized, the Mexican government began granting vast tracts of the original mission properties to members of prominent families and retired military leaders, with the primary mission of ranchos to be raising cattle. Herds of long-horn cattle were brought from Texas to Alta California, and they would graze on grasses found in the hills and valleys, from San Diego to Sonoma. José Antonio Sanchez had been awarded a grant of 14,600 acres in 1833 by the Mexican government as a reward for his military service in California. The land, known as the Buri Rancho, had been a former soldier's ranch, which Sanchez came to occupy in 1825. While he may have run

[23] Levy, R. 1978. Costanoan. In California, edited by Robert F. Heizer, pp. 485-495. Handbook of North American Indians, Vol. 8. W.G. Sturtevant, general editor, Smithsonian Institution, Washington D.C.

cattle on the land, he was unique for also tilling the land and raising crops. Sanchez built on his rancho an embarcadero, or boat landing, for shipping his hides and tallow to points along San Francisco Bay. His cattle herd, initially about 2,000 head, multiplied significantly over the years. His son, Francisco Sanchez, received title to Rancho San Pedro, located west of Rancho Buri, in 1839. At the age of 32, Francisco Sanchez became captain of the militia at the Presidio of San Francisco, and two years later, in 1842, he became alcade, or mayor, of Yerba Buena.

Shoup and Milliken state that mission secularization removed the social protection and support on which Native Americans had come to rely. It exposed them to further exploitation by outside interests, often forcing them into a marginal existence as laborers for large ranchos.[24] Following mission secularization, the Mexican population grew as the Native American population continued to decline. Euro-American settlers began to arrive in California during this period and often married into Mexican families, becoming Mexican citizens, which made them eligible to receive land grants. In 1846, on the eve of the U.S.-Mexican War (1846 to 1848), the estimated population of California was 8,000 non-natives and 10,000 Native Americans. However, these estimates have been debated. Cook suggests the Native American population was 100,000 in 1850; the U.S. Census of 1880 reports the Native American population as 20,385.[25]

Gold Rush and American Expansion Period (1848-1864)

In 1848, James W. Marshall discovered gold at Coloma in modern-day El Dorado County, which started the gold rush into the region that forever altered the course of California's history. The arrival of thousands of gold seekers in the territory contributed to the exploration and settlement of the entire State. By late 1848, approximately four out of five men in California were gold miners. The gold rush originated along the reaches of the American River and other tributaries to the Sacramento River, and Hangtown, present-day Placerville, became the closest town offering mining supplies and other necessities for the miners in El Dorado County. Gold subsequently was found in the tributaries to the San Joaquin River, which flowed north to join the Sacramento River in the great Delta east of San Francisco Bay.[26]

By 1864, California's gold rush had essentially ended. The rich surface and river placers were largely exhausted and the miners either returned to their homelands or stayed to start new lives in California. After the gold rush, people in towns such as Jackson, Placerville, and Sonora turned to other means of commerce, such as ranching, agriculture, and timber production. With the decline of gold mining, agriculture and ranching came to the forefront in the State's economy. California's natural resources and moderate climate proved well suited for cultivation of a variety of fruits, nuts, vegetables, and grains.[27]

History of the City of South San Francisco

The information in this section is based on the South San Francisco Historic Resources Survey prepared by Daley & Associates and the South San Francisco General Plan Update, Cultural and

[24] Shoup, Laurence H., and Randall T. Milliken. 1999. Inigo of Rancho Posolmi: The Life and Times of a Mission Indian.
[25] Cook, Sherburne F. 1976. The Population of the California Indians 1769–1970.
[26] Robinson, W.W. 1948. Land in California.
[27] Beck, Warren A., and Ynez D. Haase. 1974. Historical Atlas of California.

Historic Resources Existing Conditions Report. For additional information regarding the History of South San Francisco, please refer to the reports included in Appendix D.

In the 19th century, the narrow dirt paths turned into dirt roads as more settlers reached Alta California, and stagecoaches and wagons became more commonplace traveling between towns and rural communities. The San Francisco-San José Road became the north–south route between those two cities, and travelers on that route would pass by the hacienda José Antonio Sanchez occupied in the 1830s. Sanchez's hacienda was located within his Buri Rancho, approximately 12 miles south of Mission San Francisco de Assisi.

In 1856, Charles Lux bought 1,600 acres of the Buri Rancho from Sanchez's estate, and called his country home "Baden." Cattleman Henry Miller also purchased about 40 acres of the Buri Rancho lands situated along the San Francisco-San José Road as well. Cowboys and their families, livery stables, fence builders, storekeepers, and farriers would have settled nearby to support Lux's country home and Miller's cattle ranch. However, even with the completion of the San Francisco and San José Railroad in 1864 between those two cities, the area around Baden remained sparsely inhabited until Lux died in 1887.

Meanwhile, in the City of San Francisco, a group of investors was scooping up the excess government lands not wanted by the Southern Pacific Railroad to create the South San Francisco Homestead and Railroad Association (SSFHRA). In 1849, this group had defined the location of a community known as "South San Francisco" to be generally southeast of Mission Street to the shore of San Francisco Bay. Housing lots were plotted within the SSFHRA holdings, as well as an area for where industrial shops and stockyards would be located along the shore of San Francisco Bay.

Associated with the stockyards were abattoirs, wholesale butchers, tanneries, and tallow renderers, who killed horses, cattle, pigs, sheep, poultry, and other mammals, for meat and by-products. Because of the noxious fumes, offal, and other foul waste products that resulted from the activities at butchering facilities, these types of businesses were usually relegated to the most distant area of a city or town. Known locally in San Francisco as "Butchertown," this community, located south of Market Street, was continually pushed south of the residential areas of San Francisco as the City expanded year after year. Even as the physical buildings and structures of Butchertown moved southward, the community continued to be referred to as being in "South San Francisco." By the 1860s, Butchertown and "South San Francisco" were located in the Potrero District.

By the 1880s, the local wholesale butchers of Butchertown had formed a unified front against dressed meat being sold to the retail butchers in San Francisco from meat suppliers located outside of Butchertown. Butchertown had gone so far as to issue threats of withholding credit from retail butchers if they were found to be selling meat not dressed in Butchertown. With the establishment of the transcontinental railroad system, and the ability to ship meat across the county in refrigerated boxcars, major meatpackers from Chicago and Omaha, such as Armour and Swift, made moves to invade the Butchertown sales region. Just as the "meat war" was reaching a tipping point in San Francisco, Charles Lux, owner of the country estate "Baden" in San Mateo County, died in 1887.

The South San Francisco Land and Improvement Company (SSFLIC) was created by wealthy investors who purchased Lux's 1,600 acres and an additional 1,600 acres from other holders of Buri Rancho land adjoining Lux's land. Many of the shareholders of SSFLIC were the same as the now-defunct SSFHRA and men with direct ties to the Union Stock Yards in Chicago. Phillip D. Armour Sr. and Gustavus Swift Sr. of the Union Stock Yards were active participants of SSFLIC, which planned to create its own town near Baden. SSFLIC would establish a massive meat processing operation and plot a town where laborers of the meatpacking plants could build and own modest houses. In 1892, the new town near Baden was first called South City, but because of its direct and continued relationship with the meatpacking industry, the new town was eventually named South San Francisco even though it was no longer located in the City or county of San Francisco.

When the construction of a large copper smelter and refinery were planned for construction at Point Bruno in 1906, the San Mateo County Board of Supervisors voted against it because of the great harm it could cause the residents and countryside from the toxic fumes and by-products. SSFLIC had courted the American Smelting and Refining Company, owned by the Guggenheim Family, to construct the massive smelting facility in South San Francisco, as the project would require the purchase of over 500 acres of land owned by SSFLIC. It is not an exaggeration to say that the future direction and vision for the growth of the City of South San Francisco was decided on September 4, 1908, when the citizens of South San Francisco voted to repudiate the goals of SSFLIC. The City of South San Francisco, with a population of 2,000 residents, immediately addressed the goals of building schools, churches, a library, and a town hall.

To the northwest of South San Francisco, the north portion of San Mateo County became Daly City in 1911. Construction of the El Camino Highway, between San Bruno and Burlingame, was started in 1912, and the improvements to the old San Francisco-San José Road gave suburban residents an alternative to traveling by rail. With the popularity and availability of owning an automobile, construction began on Skyline Boulevard in 1922 and on the Bayshore Highway in 1924. The town of Lawndale/Colma was incorporated in 1924.

The City of San Francisco purchased Mills Field, from the Mills Estate in San Mateo County, for the construction of a modern airport in 1930. United Airlines began service to San Francisco-Oakland Airport in 1932, but the effects of the Great Depression caused the airport and air travel to suffer up to the entrance of the United States into World War II. As there was a Pacific front to the war after the attack at Pearl Harbor in 1941, the U.S. War Department took control of the airport. The U.S. Government invested 10 million dollars' worth of improvements that included reclaiming over 100 acres of wetlands. In 1946, the San Francisco-Oakland Airport was providing 6,000 jobs and was the largest employer on the peninsula. Workers at the airport would have been attracted to living in nearby South San Francisco.

During World War II, Bethlehem Steel and other military contractors had nearly 10,000 workers at their plants and factories in South San Francisco. "Some 48 ships were built there, including four escort aircraft carriers." Tract homes were constructed in South San Francisco to house the influx of residents working in the factories along San Francisco Bay.

The 1920s proved to be another era of business, industrial, and civic expansion in South San Francisco. During this decade, 36 industries were in operation. As a result of the increase in population to this area, which brought families with children, a new school system was developed. The Martin School and Magnolia School were built in the mid-1920s. In 1923, the Chamber of Commerce erected a whitewashed sign above the City, celebrating its position as the Industrial City. Six years later, these letters were replaced by 60-foot-tall concrete letters, this time paid for by taxpayers, who voted for their erection. In 1927, land was purchased for the McLellan Nursery, which soon became the world's largest orchid nursery (relocated to Watsonville in 1998). Mills Field, a base for the United States Army Aircorp, also opened at this time.

The growth in population, industries, and businesses was not even halted by the Great Depression. By 1938 the City measured over 7 square miles and boasted a population of 6,500, of which 500 were employed in the local industries and businesses. By 1948, the population reached 15,863 and the City had 46 industries. In an effort to meet the housing shortage, the federal government, which operated the South San Francisco Housing Authority, built Lindenville, a 770-unit development for 4,200 persons (demolished in 1958). Other development constructed by the South San Francisco Housing Authority in 1945 included a 152-unit Palau Village, a 176-unit Cape Esperance Village, and Industrial Village, which was designated as low-income housing; the locations for the housing sites are unknown.

The 1950s brought modern industrial parks to the east of U.S. Highway 101 (US-101) area, such as Cabot, Cabot & Forbes. Freight forwarding, light industries, and other airport-related businesses thrived. A new era for the City of South San Francisco began in 1976 with the founding of Genentech by venture capitalist Robert Swanson and Molecular Biologist Dr. Herbert Boyer. Their objective was to explore ways of using recombinant DNA technology to create breakthrough medicines. This earned the City of South San Francisco the title of "Birthplace of Biotechnology," and thus attracted other biotech and pharmaceutical businesses to the area, bringing economic growth and stability to the community for several years. As of 2019, over 200 Biotech companies are in operation in the City of South San Francisco.

Cultural Resources in the Planning Area

The City maintains a diverse patina of historic buildings and structures, constructed of a variety of materials. The earliest buildings were constructed of wood or brick, were modest in size, and most were vernacular interpretations of architectural styles popular at the time of their construction. Corrugated metal was commonplace for industrial facilities, and stucco became the preferred exterior finish, beginning from the 1920s through the 1940s.

Historic Resources, Districts, and Landmarks, and National and California Register Listed Cultural Resources

The information in this section is based on the South San Francisco General Plan Update, Cultural and Historic Resources Existing Conditions Report, dated December 2019, and the South San Francisco Historic Resources Survey prepared by Daly & Associates, dated June 2022, which are included in Appendix D. The information in this section is also based on the Draft EIR for the Southline Specific Plan dated September 2021 (State Clearinghouse Number 2020050452).

Two National Register of Historic Places (NRHP)-listed properties are located within the City: the Martin Building, located at 265 Grand Avenue (also known as the Metropolitan Hotel), and the South San Francisco Hillside Sign. These two properties are also the only resources listed on the California Register of Historic Places (CRHP). Details on both properties can be found in Table 3.4-1 and Exhibit 3.4-1.

Table 3.4-1: Cultural Resources Listed on the California Register Within the City of South San Francisco

Primary/Property Number	Other Identifiers	Information Source	Resource Description	Status Codes
P-41-000975; 005605	NPS-97000043-0000; DOE-41-90-0023-0000; HUD900625J; 4080-0136-0019; N1973	CRHR; HPD; NRHP	Martin Building; Metropolitan Hotel; 265 Grand Avenue; Constructed 1912	1S; 2S2; 3S
P-41-000953; 005583	NPS-96000761-0000; 4080-0132-0000; N1952; NAC 123861564	CRHR; HPD; NAHC; NRHP	South San Francisco Hillside Sign; California SP South San Francisco Hillside Sign; Park Way; Constructed 1929	1S; 7W; 3S

Notes:
CRHR = California Register of Historical Resources
HPD = Historic Property Data
NAHC = Native American Heritage Commission
NRHP = National Register of Historic Places
Source: South San Francisco General Plan Update Existing Conditions Report Appendix CUL: Compendium of Cultural Resources Table CUL-1, 2019.

Eligible Historic Architectural Resources

Historic era buildings and structures, typically over 50 years in age, may be considered eligible for inclusion on the NRHP and CRHP. Those found eligible either through survey or evaluation are considered historic resources under CEQA and should be taken into account during the planning process. Approximately 250 eligible historic architectural resources are located within the Planning Area, the majority of which are not included within the City's register, but were determined eligible through environmental reviews. Details on these properties are listed in Table CUL-5 in Appendix CUL of the 2019 Existing Conditions Report (Appendix D), and include residential homes, commercial buildings, medical facilities, fraternal organizations, civic, educational, religious, and transportation infrastructure. These buildings and structures are distributed throughout the Planning Area. Evaluated resources determined to be ineligible for listing have been excluded from Table CUL-5 in Appendix CUL of the 2019 Existing Conditions Report (Appendix D).

Potential Historic Resources

A total of four potential historic resources are situated within the City. The potential historic resources include residential properties (located along Baden, Pine, and Miller Avenues) and the South San Francisco/San Bruno Water Quality Control Plant. Details on potential historic resources can be found in Table 3.4-2 and their locations are depicted in Exhibit 3.4-2.

Table 3.4-2: Potential Historic Resources Within the City of South San Francisco

Primary/Property Number	Other Identifiers	Information Source	Resource Description	Status Codes
P-41-000819; 005449	4080-0005-9999	HPD	Matched Residences; Baden Avenue; Constructed 1895	3S
P-41-000939; 005569	4080-0122-9999	HPD	Vernacular Houses; Miller Avenue; Constructed 1907	5S2
P-41-000944; 005574	4080-0123-9999	HPD	Pine Avenue; Constructed 1922	7R
P-41-002557	S-048426	ICDB	South San Francisco/San Bruno Water Quality Control Plant; 195 Belle Air Road	7R

Notes:
ICDB = Information Center Database
HPD = Historic Property Data
Source: South San Francisco General Plan Update Existing Conditions Report Appendix CUL: Compendium of Cultural Resources Table CUL-4, 2019.

Historic Districts

One historic district is situated within the City, the Grand Avenue Commercial Historic District. A historic district consists of two or more structures considered to collectively have historic merit. Details on this historic district can be found in Table 3.4-3 and its location is depicted in Exhibit 3.4-3.

Table 3.4-3: Historic Districts Within the City of South San Francisco

Primary/Property Number	Other Identifiers	Information Source	Resource Description	Status Codes
P-41-002407; 145323	4080-0136-9999	ICDB; HPD	Grand Avenue Commercial Historic District; Constructed 1891	3S

Notes:
HPD = Historic Property Data
ICDB = Information Center Database
Source: South San Francisco General Plan Update Existing Conditions Report Appendix CUL: Compendium of Cultural Resources Table CUL-3, 2019.

Locally Designated Historic Landmarks

The City recognizes 40 designated Historic Landmarks that are considered cultural resources under CEQA and should be noted for planning purposes. Details on local landmarks can be found in Table 3.4-4 and their locations are depicted in Exhibit 3.4-4a, Exhibit 3.4-4b, and Exhibit 3.4-4c. These listed properties encompass a broad range of building types and styles, including residential homes, commercial buildings (Mexico Tipico, Bank of South San Francisco), institutional buildings (City Hall, Grand Avenue Library), industrial facilities (South City Lumber), and commemorative monuments and features (Donors Sidewalk of Names, Martin Memorial Fountain).

Table 3.4-4: City-designated Historic Landmarks

Case File No.	Address	Property Name
HR-88-001	314-316 Baden Avenue	Bertucelli House
HR-97-023	425 Baden Avenue	Johnson Home (c. 1892)
HR-93-017	478 Baden Avenue	Cavassa Home
HR-96-022	805-809 Baden Avenue	Bungalow Court
HR-99-002	429 Commercial Avenue	Home (c 1900)
HR-88-002	210 Eucalyptus Avenue	Spangler House
HR-88-003	211 Eucalyptus Avenue	Peck's Residence
HR-93-019	223 Grand Avenue	Mexico Tipico/Lind Market
HR-88-008	263-265 Grand Avenue	Metropolitan Hotel
HR-88-007	304 Grand Avenue/301 Linden Avenue	Bank of South San Francisco
HR-86-001	400 Grand Avenue	Martin Memorial Fountain
HR-86-001	400 Grand Avenue	City Hall
HR-90-012	409 Grand Avenue	Price Furniture Company
HR-88-009	411 Grand Avenue	Enterprise Journal Building
HR-87-001	427 Grand Avenue	Plymire-Schwartz House
HR-86-001	440 Grand Avenue	Grand Avenue Library
HR-00-001	470 Grand Avenue	South San Francisco Women's Club
HR-87-001	519 Grand Avenue	Dr. Plymire's Hospital
HR-98-001	643 Grand Avenue	Home (c. 1892)
HR-89-007	718 Grand Avenue	Haaker Home
HR-89-008	722 Grand Avenue	Carmody Home
HR-89-009	726 Grand Avenue	Sassman House
HR-89-010	734 Grand Avenue	Doak Home
HR-88-005	743 Grand Avenue	Dotson Home
HR-89-011	762 Grand Avenue	Stickle Home
HR-89-002	798 Grand Avenue	McGovern Home
HR-91-013	221 Laurel Avenue	221 Laurel Avenue
HR-91-014	201 Linden Avenue	State Theater
HR-91-015	340 Miller Avenue	"Melly" Cohan House
HR-99-001	341-345 Miller Avenue	Home (c. 1920)
HR-86-002	Miller Avenue near Walnut Avenue	Donors' Sidewalk of Names
HR-03-001	540 Miller Avenue	First Church of Christ Scientist

Case File No.	Address	Property Name
HR-94-020	636 Miller Avenue	C.J. Ledwith Home
HR-94-021	638 Miller Avenue	C.E. Stahl House
HR-88-004	814 Miller Avenue	Ledwith Home
HR-89-006	499 Railroad Avenue	South City Lumber
HR-87-002	319 Spruce Avenue	Eikerenkotter House
HR-86-003	Sign Hill	Sign Hill Letters
Source: South San Francisco General Plan Update Existing Conditions Report Appendix CUL: Compendium of Cultural Resources Table CUL-2, 2019.		

Infrastructure and Engineering Resources

Infrastructure and engineering structures, such as roads and bridges exceeding 50 years in age, may be considered eligible for listing on the NRHP, CRHR, and/or a local register of historical resources. Thirty-six such resources, per the California Department of Transportation (Caltrans) Bridge Inventory listings, exist within the City and are listed in Table 3.4-5. Of the 36 resources, 35 have been determined not to be eligible for listing on the NRHP, and one has not had its significance determined (P-41-002439, Airport Boulevard Underpass; Local Bridge).

The Cut Stone Bridge is a culvert portal of cut granite stones located just north of Spruce Avenue at the Bay Area Rapid Transit (BART) right of way. It was originally constructed in 1863 by the San Francisco and San José Railroad. When BART was constructed in the 1960s, this historic structure was removed and put back into place. The Cut Stone Bridge is one of the oldest surviving historic structures in the City.

Table 3.4-5: Caltrans Bridge Inventory Listings Within the City of South San Francisco

Primary/Property Number	Other Identifiers	Information Source	Resource Description	Status Codes
P-41-002439	35C0017; S-036747; S-043525	ICDB; LBI	Airport Boulevard Underpass; Local Bridge; Constructed 1927; Historical significance not determined	—
	35C0021	LBI	Colma Creek; Local Bridge; Constructed 1977; Bridge not eligible for NRHP	—
	35C0031	LBI	Colma Canal; Local Bridge; Constructed 1974; Bridge not eligible for NRHP	—
	35C0032	LBI	Dunman Street Overcrossing; Local Bridge Constructed 1965; Bridge not eligible for NRHP	—
	35C0044	LBI	San Bruno Canal; Local Bridge; Constructed 1949; Bridge not eligible for NRHP	—
	35C0046	LBI	San Bruno Channel; Local Bridge; Constructed 1986; Bridge not eligible for NRHP	—

Primary/Property Number	Other Identifiers	Information Source	Resource Description	Status Codes
	35C0047	LBI	San Bruno Channel (E); Local Bridge; Constructed 1986; Bridge not eligible for NRHP	—
	35C0048	LBI	Colma Creek; Local Bridge; Constructed 1960; Bridge not eligible for NRHP	—
	35C0078	LBI	Colma Creek; Local Bridge; Constructed 1975; Bridge not eligible for NRHP	—
	35C0079	LBI	Colma Canal; Local Bridge; Constructed 1976; Bridge not eligible for NRHP	—
	35C0101	LBI	Colma Creek; Local Bridge; Constructed 1975; Bridge not eligible for NRHP	—
	35C0126	LBI	Branch of Colma Creek; Local Bridge; Constructed 1955; Bridge not eligible for NRHP	—
	35C0148L	LBI	Grand Avenue OH; Local Bridge; Constructed 1984; Bridge not eligible for NRHP	—
		LBI	Grand Avenue OH; Local Bridge; Constructed 1984; Bridge not eligible for NRHP	—
	35C0164	LBI	San Bruno Channel; Local Bridge; Constructed 1948; Bridge not eligible for NRHP	—
	35C0173	LBI	Oyster Point Boulevard OH; Local Bridge; Constructed 1994; Bridge not eligible for NRHP	—
	35 0094L	SBI	South San Francisco OH; State Bridge; Constructed 1948; Bridge not eligible for NRHP	—
P-41-002435	35 0094R; S04352	ICDB; SBI	South San Francisco OH; State Bridge; US-101 Viaduct, M.P. 09.40; Constructed 1948; Bridge not eligible for NRHP	—
	35 0118	SBI	Colma Creek; State Bridge; Constructed 1947; Bridge not eligible for NRHP	—
	35 0119	SBI	Colma Road Undercrossing; State Bridge; Constructed 1947; Bridge not eligible for NRHP	—
	35 0121	SBI	South SF Belt Railway OH; State Bridge; Constructed 1948; Bridge not eligible for NRHP	—
	35 0130S	SBI	Sierra Point Off-Ramp OH; State Bridge; Constructed 1982; Bridge not eligible for NRHP	—
	35 0131S	SBI	Sierra Point Off-Ramp Separation; State Bridge; Constructed 1957; Bridge not eligible for the NRHP	—
	35 0212L	SBI	Westborough Boulevard UC; State Bridge; Constructed 1967; Bridge not eligible for NRHP	—
	35 0212R	SBI	Westborough Boulevard UC; State Bridge; Constructed 1967; Bridge not eligible for NRHP	—

Primary/Property Number	Other Identifiers	Information Source	Resource Description	Status Codes
	35 0228L	SBI	Avalon Drive UC; State Bridge; Constructed 1971; Bridge not eligible for NRHP	—
	35 0228R	SBI	Avalon Drive UC; State Bridge; Constructed 1971; Bridge not eligible for NRHP	—
	35 0255L	SBI	Route 380/US-101 Separation; State Bridge; Constructed 1976; Bridge not eligible for NRHP	—
	35 0281F	SBI	West Route 380/North US-101 Connector; State Bridge; Constructed 1976; Bridge not eligible for NRHP	—
	35 0307	SBI	Oyster Point Drain; State Bridge; Constructed 1995; Bridge not eligible for NRHP	—
	35 0316	SBI	Oster Point Boulevard OC; State Bridge; Constructed 1994; Bridge not eligible for NRHP	—
	35 0317K	SBI	Oyster Point Boulevard Off-ramp SEP&OH; State Bridge; Constructed 2004; Bridge not eligible for NRHP	—
	35 0318K	SBI	Oyster Point Boulevard On-ramp SEP&OH; State Bridge; Constructed 2004; Bridge not eligible for NRHP	—
	35 0321S	SBI	Oyster Point Boulevard On-ramp; State Bridge; Constructed 1995; Bridge not eligible for NRHP	—

Notes:
ICDB = Information Center Database
LBI = Local Bridge Inventory
SBI = State Bridge Inventory
Source: South San Francisco General Plan Update Existing Conditions Report Appendix CUL: Compendium of Cultural Resources Table CUL-8, 2019.

Southline Specific Plan Potential Historic District

The Southline Specific Plan area is located at the intersection of South Maple Avenue and Tanforan Avenue, adjacent to the City of San Bruno. The Specific Plan area encompasses seven parcels, including Assessor Parcel Numbers (APNs) 014-250-090, 014-250-080, 014-250-050, 014-241-030, 014-241-040, 014-232-030, and 014-232-050, spread over 26.5 acres. The Specific Plan area is occupied by existing and vacant industrial uses and surface parking. Six of the parcels contain a total of 16 buildings and/or structures, 11 of which were constructed more than 45 years ago. The seventh parcel is a vacant former right-of-way that previously contained a Southern Pacific Railroad spur. Eleven of the sixteen extant buildings in the Specific Plan area are located within the Southline Potential Historic District. The buildings were constructed between 1890 and 1978 and are considered historical resources under CEQA for having the potential to be contributors to a historic district (Table 3.4-6).

Table 3.4-6: Potential Historic District Contributors Within the Southline Specific Plan Area

Assessor Parcel Number	Address	Use Type	Location on Parcel	Year Built
014-250-090	30 Tanforan Avenue* 40 Tanforan Avenue* 347 S. Maple Avenue 349 S. Maple Avenue	Administrative office Industrial warehouse Industrial warehouse Industrial warehouse	Southwest corner Center Northeast corner Northeast corner	1963 c. 1956 c. 1965 1959
014-250-080	50 Tanforan Avenue*	Industrial warehouse	West boundary	1959
014-250-050	54 Tanforan Avenue*	Industrial warehouse	Center	c. 1943
014-241-030	240 Dollar Avenue* 180 Linden Avenue*	Industrial factory Industrial warehouse	Center West boundary	c. 1943/ 1956/1965 1956/1982
014-241-040	160 S. Linden Avenue* 160 S. Linden Avenue* 325 S. Maple Avenue	Chemical plant Ancillary building Industrial warehouse	Southeast corner Southeast corner Southwest corner	1940/1958 c. 1940 1946/1957

Notes:
* Property addresses marked with an asterisk symbol are located partially or fully within the Phase 1 site.
Source: Draft Environmental Impact Report, Southline Specific Plan, September 28, 2021.

Archaeological and Tribal Cultural Resources

Archaeological resources span both historic and prehistoric periods and differ from built environment cultural resources in that they are largely subsurface, and are most often encountered by pedestrian survey, archaeological testing, or during project-related ground disturbance. TCRs are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe.

Both resource types may be included or determined to be eligible for inclusion in the NRHP, CRHR, a local register of historical resources, or be determined significant by a lead agency. A cultural landscape that meets these criteria is a Tribal Cultural Resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. Historical resources, unique archaeological resources, or nonunique archaeological resources may also be TCRs if they meet these criteria.

Pursuant to Public Resources Code Section 21082.3(c)(2), the locations of known archaeological resources within the City must be kept confidential and cannot be disclosed to the public. A listing of known archaeological and tribal cultural resources can be found in Tables 3.4-7 and Table 3.4-8. Consultation with local stakeholders, including tribal authorities, on the location, nature and mitigation required to protect these nonrenewable resources, constitutes a vital part of the planning process.

Table 3.4-7: Prehistoric Archaeological Resources Within the City of South San Francisco

Primary/Property Number	Other Identifiers	Information Source	Resource Description	Status Codes
P-41-000042	CA-SMA-000038	ICDB	Nelson 377; AP01	—
P-41-000043	CA-SMA-000039	ICDB	Nelson 378; AP01	—
P-41-000044	CA-SMA-000040; S-001784; S-004925; S-005052; S-005949; S-007125; S-010097; S-014725; S-019783; S-019927; S-020096; S-022986; S-026045; S-027930	ICDB	AP15; Shellmound	—
P-41-000045	CA-SMA-000041; S-049125	ICDB	Nelson 380; AP01	—
P-41-000046	CA-SMA-000042	ICDB	Nelson 381; AP01	—
P-41-000047	CA-SMA-000043; S-049125	ICDB	Nelson 382; AP01	—
P-41-000048	CA-SMA-000044	ICDB	Nelson 383; AP01	—
P-41-000049	CA-SMA-000045	ICDB	Nelson 384; AP01	—
P-41-000050	CA-SMA-000046	ICDB	Nelson 385; AP01	—
P-41-000051	CA-SMA-000047	ICDB	Nelson 386; AP01	—
P-41-000095	CA-SMA-000092; S-001784; S-004925; S-005052; S-005949; S-010097; S-014725; S-010097; S-022986; S-02605; S-02793	ICDB	San Bruno Mountain State and County Park; AP16	—
P-41-000409	CA-SMA-000299; S-016687; S-016688; S-022258; S-022259; S-027930; S-039770	ICDB	Colma Creek; AP15; AP16; This resource is located along Colma Creek; its location is not clear at this time	—
P-41-000495	CA-SMA-000355; S-022656; S-022972; S-023271; S-027930; S-03361	ICDB	Colma Creek; Chestnut; AP11; AP15	—
P-41-002164	CA-SMA-002164; S-031689	ICDB	North Colma Creek; AP01; AP11; AP15	—
P-41-002207	CA-SMA-000386; S-035507; S-038684; S-047838; S-050668; S-051368	ICDB	Airport and Armour Buried Site; AP15	—

Primary/Property Number	Other Identifiers	Information Source	Resource Description	Status Codes
Notes: ICDB = Information Center Database Source: South San Francisco General Plan Update Existing Conditions Report Appendix CUL: Compendium of Cultural Resources Table CUL-6, 2019.				

Table 3.4-8: Historic Era Archaeological Resources Within the City of South San Francisco

Primary/Property Number	Other Identifiers	Information Source	Resource Description	Status Codes
P-41-002147	CA-SMA-000353H; FTA040913A; S-030760; S-031824; S-048738	ICDB	Colma Creek Site; PN-1	—
Notes: ICDB = Information Center Database Source: South San Francisco General Plan Update Existing Conditions Report Appendix CUL: Compendium of Cultural Resources Table CUL-7, 2019.				

3.4.3 - Regulatory Framework

Federal

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA), as amended, established the NRHP, which contains an inventory of the nation's significant prehistoric and historic properties. Under 36 Code of Federal Regulations 60, a property is recommended for possible inclusion on the NRHP if it is at least 50 years old, has integrity, and meets one of the following criteria:

- It is associated with significant events in history, or broad patterns of events;
- It is associated with significant people in the past;
- It embodies the distinctive characteristics of an architectural type, period, or method of construction; or it is the work of a master or possesses high artistic value; or it represents a significant and distinguishable entity whose components may lack individual distinction; or
- It has yielded, or may yield, information important in history or prehistory.

Certain types of properties are usually excluded from consideration for listing in the NRHP, but they can be considered if they meet special requirements in addition to meeting the criteria listed above. Such properties include religious sites, relocated properties, graves and cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act (ARPA) amended the Antiquities Act of 1906 (16 United States Code [USC] §§ 431–433) and set a broad policy that archaeological resources are important to the nation and should be protected and required special permits before the excavation or removal of archaeological resources from public or Native American lands. The purpose of the ARPA was to secure, for the present and future benefit of the American people, the protection of archaeological resources and sites that are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data that were obtained before October 31, 1979.

American Indian Religious Freedom Act

The American Indian Religious Freedom Act (AIRFA) established federal policy to protect and preserve the inherent rights of freedom for Native American groups to believe, express, and exercise their traditional religions. These rights include but are not limited to access to sites, use and possession of sacred objects, and freedom to worship through ceremonials and traditional rites.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

State

CEQA Guidelines Section 15064.5(a)—CEQA Definition of Historical Resources

CEQA Guidelines Section 15064.5(a), in Title 14 of the California Code of Regulations, defines 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.
2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code, or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript which 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 a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources.

4. 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 Section 5020.1(k) of the Public Resources Code), or identified in n historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

Therefore, under the CEQA Guidelines, even if a resource is not included on any local, State, or federal register, or identified in a qualifying historical resources survey, a lead agency may still determine that any resource is a historical resource for the purposes of CEQA if there is substantial evidence supporting such a determination. A lead agency must consider a resource to be historically significant if it finds that the resource meets the criteria for listing in the CRHR. Archaeological and historical sites are protected pursuant to a wide variety of State policies and regulations, as enumerated in the Public Resources Code. Cultural resources are recognized as nonrenewable resources and receive additional protection under the Public Resources Code and CEQA.

CEQA Guidelines Section 15064.5(a)(3)—California Register of Historical Resources Criteria

As defined by CEQA Guidelines, Section 15064.5(a)(3)(A-D), a resource shall be considered historically significant if the resource meets the criteria for listing on the CRHR. The CRHR and many local preservation ordinances have employed the criteria for eligibility to the NRHP as a model (see criteria described above under the description of the NHPA), since the NHPA provides the highest standard for evaluating the significance of historic resources. A resource that meets NRHP criteria is clearly significant. In addition, a resource that does not meet NRHP standards may still be considered historically significant at a local or State level.

California Public Resources Code Section 5024.1—California Register of Historical Resources

Section 5024.1 of the Public Resources Code states that the CRHR is a guide to be used by State and local agencies, private groups, and citizens to identify the State's historical resources and to indicate what properties are to be protected from substantial adverse change. Administration of the CRHR is to be overseen by the NAHC. Section 5024.1 indicates that the register shall include historical resources determined by the NAHC, according to adopted procedures, to be significant and to meet the criteria in subdivision (c).

CEQA Guidelines 15064.5(c)—Effects on Archaeological Resources

CEQA Guidelines state that a resource need not be listed on any register to be found historically significant. CEQA Guidelines direct lead agencies to evaluate archaeological sites to determine whether they meet the criteria for listing in the CRHR. If an archaeological site is a historical resource, in that it is listed or eligible for listing in the CRHR, potential adverse impacts to it must be considered. If an archaeological site is considered not to be a historical resource but meets the

definition of a "unique archaeological resource" as defined in Public Resources Code Section 21083.2, then it would be treated in accordance with the provisions of that section.

CEQA Guidelines Section 15064.5(d)—Effects on Human Remains

Native American human remains and associated burial items may be significant to descendant communities and/or may be scientifically important for their informational value. They may be significant to descendant communities for patrimonial, cultural, lineage, and religious reasons. Human remains may also be important to the scientific community, such as prehistorians, epidemiologists, and physical anthropologists. The specific stake of some descendant groups in ancestral burials is a matter of law for some groups, such as Native Americans (CEQA Guidelines § 15064.5(d); PRC § 5097.98). CEQA and other State regulations regarding Native American human remains provide the following procedural requirements to assist in avoiding potential adverse effects on human remains within the contexts of their value to both descendant communities and the scientific community:

- When an initial study identifies the existence or probable likelihood that a project would affect Native American human remains, the lead agency is to contact and work with the appropriate Native American representatives identified through the NAHC to develop an agreement for the treatment and disposal of the human remains and any associated burial items (CEQA Guidelines § 15064.5(d); PRC § 5097.98).
- If human remains are accidentally discovered, the County Coroner must be contacted. If the County Coroner determines that the human remains are Native American, the Coroner must contact the NAHC within 24 hours. The NAHC must identify the Most Likely Descendant (MLD) to provide the opportunity to make recommendations for the treatment and disposal of human remains and associated burial items.
- If the MLD fails to make recommendations within 24 hours of notification or the project applicant rejects the recommendations of the MLD, the Native American human remains and associated burial items must be reburied in a location not subject to future disturbance within the project site (PRC § 5097.98).
- If potentially affected human remains or a burial site may have scientific significance, whether or not it has significance to Native Americans or other descendant communities, then under CEQA, the appropriate mitigation of effect may require the recovery of the scientific information of the remains/burial through identification, evaluation, data recovery, analysis, and interpretation (CEQA Guidelines § 15064.5(c)(2)).

California Public Resources Code Section 5097.91—Native American Heritage Commission

Section 5097.91 of the Public Resources Code established the NAHC, whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands. Under Section 5097.91 of the Public Resources Code, a State policy of noninterference with the free expression or exercise of Native American religion was articulated along with a prohibition of severe or irreparable damage to Native American sanctified cemeteries, places of worship, religious or ceremonial sites or sacred shrines located on public property. Section 5097.98 of the Public Resources Code specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human

remains from a County Coroner. Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

California Senate Bill 18—Protection of Tribal Cultural Places

SB 18 (Government Code § 65352.3) incorporates the protection of California traditional tribal cultural places into land use planning for cities, counties, and agencies by establishing responsibilities for local governments to contact, refer plans to, and consult with California Native American tribes as part of the adoption or amendment of any general or specific plan proposed on or after March 1, 2005. SB 18 requires public notice to be sent to tribes listed on the NAHC SB 18 Tribal Consultation list within the geographical areas affected by the proposed changes. Tribes must respond to a local government notice within 90 days (unless a shorter time frame has been agreed upon by the tribe), indicating whether they want to consult with the local government. Consultations are for the purpose of preserving or mitigating impacts to places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code that may be affected by the proposed adoption or amendment to a general or specific plan.

California Assembly Bill 52—Effects on Tribal Cultural Resources

AB 52 was signed into law on September 25, 2014, and provides that any public or private "project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment." TCRs include "[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are eligible for inclusion in the CR or included in a local register of historical resources." Under prior law, TCRs were typically addressed under the umbrella of "cultural resources," as discussed above. AB 52 formally added the category of "tribal cultural resources" to CEQA and extends the consultation and confidentiality requirements to all projects, rather than just projects subject to SB 18 as discussed above.

The parties must consult in good faith, and consultation is deemed concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect on a TCR (if such a significant effect exists); or (2) when a party concludes that mutual agreement cannot be reached. Mitigation measures agreed upon during consultation must be recommended for inclusion in the environmental document. AB 52 also identifies mitigation measures that may be considered to avoid significant impacts if there is no agreement on appropriate mitigation. Recommended measures include:

- Preservation in place
- Protecting the cultural character and integrity of the resource
- Protecting the traditional use of the resource
- Protecting the confidentiality of the resource
- Permanent conservation easements with culturally appropriate management criteria

California Public Resources Code Section 21074—Effects on Tribal Cultural Resources

AB 52 amended the CEQA statute to identify an additional category of resource to be considered under CEQA, called "tribal cultural resources," and added Public Resources Code Section 21074, which defines "tribal cultural resources" as follows:

(a) "Tribal cultural resources" are either of the following:
  (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are either of the following:
    A) Included or determined to be eligible for inclusion in the CRHR.
    B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
  (2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American Tribe.

(b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

(c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

Health and Safety Code Section 7050.5 (Treatment of Human Remains)

Section 7050.5 of the California Health and Safety Code sets forth provisions related to the treatment of human remains. As the Code states, "every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor"[28] except under circumstances as provided in Section 5097.99 of the Public Resources Code. The regulations also provide guidelines for the treatment of human remains found in locations other than a dedicated cemetery, including responsibilities of the Coroner.

Public Resources Code Section 5097.98 (Discovery of Human Remains)

Section 5097.98 provides protocol for the discovery of human remains. It states that "when the commission receives notification of a discovery of Native American human remains from a County Coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify persons believed to be most likely descended from the deceased Native American."[29] It also sets forth provisions for descendants' preferences for treatment of the human remains and what should be done if the commission is unable to identify a descendant.

[28] State of California. 1987. Health and Safety Code Section 7050.5.
[29] State of California. 2009. Public Resources Code Section 5097.98.

Local

South San Francisco General Plan Update

The General Plan Update proposes the following policies and actions that assist in reducing or avoiding impacts related to cultural and tribal cultural resources:

Environmental and Cultural Stewardship Element

Policy ES-9.1 Maintain a Historic Resources Inventory. Maintain and update a Historic Resources Inventory at regular intervals to promote awareness of these community resources and as a tool to further their preservation. Give priority to identifying and establishing Historic Districts.

Action ES-9.1.1 Explore the feasibility of a Downtown Historic Commercial District development. Explore the feasibility of establishing a Downtown South San Francisco Historical Commercial District to promote the revitalization and redevelopment of the area while supporting existing small business owners in the district from being displaced.

Action ES-9.1.2 Prepare Downtown urban design guidelines. Institute Downtown urban design guidelines and require design review of developments in the proposed Downtown South San Francisco Historical Commercial District to ensure that the height, massing, and design of buildings furthers Downtown's character.

Action ES-9.1.3 Expand historic markers and maps to promote and celebrate history. Expand resources such as historic maps, historic markers, or self-guided walking tours to promote and celebrate historic preservation in South San Francisco.

Action ES-9.1.4 Expand historic resources education through partnerships. Work with neighborhood groups and historic preservation advocacy groups on events, materials, and efforts to educate the public on the positive benefits of historic preservation generally and in specific neighborhoods.

Action ES-9.1.5 Preservation resources. Prepare a vision for the preservation of historic resources using the Mills Act, State Tax Credit Program, or other available tools.

Policy ES-9.2 Identify historic resources. Encourage the voluntary identification, conservation, and reuse of historical structures, properties, and sites with special and recognized historic, architectural, or aesthetic value.

Policy ES-9.3 Encourage adaptive reuse of historic resources. Encourage historic resources to remain in their original use whenever possible. The adaptive use of historic resources is preferred, particularly as inns, vacation rentals, light commercial use, museums, educational facilities, or visitor-serving uses, when the original use can no longer be sustained.

Policy ES-9.4 Protect hardscape and cultural landscape elements. Protect and preserve historic sidewalk stamps, street signs, lampposts, street trees, and other hardscape and cultural landscape elements, in addition to designated historical buildings,

structures, and sites that contribute to the historic character of a neighborhood, and the City.

Policy ES-9.5 Require historic surveys as part of development project requirements. Require the submittal of historic reports and surveys prepared as part of the environmental review process.

Policy ES-10.1 Maintain archaeological procedures for new development. Maintain formal procedures for minimizing and mitigating impacts to archaeological resources.

Policy ES-10.2 Support archaeological education. Support educational efforts that increase community awareness, appreciation, and support for South San Francisco's archaeological resources.

Policy ES-10.3 Require development proposals be referred to archaeological resources. Require that development proposals be referred to the Northwest Information Center of the California Archaeological Inventory, Native American Heritage Commission (NAHC), and local Native American tribes for review and recommendations regarding supplemental field investigation.

Policy ES-10.4 Ensure the protection of known archaeological resources through records review. Ensure the protection of known archaeological resources in the City by requiring a records review for any development proposed in areas of known resources.

Policy ES-10.5 Discovery of significant historic or prehistoric archaeological artifacts. If construction or grading activities result in the discovery of significant historic or prehistoric archaeological artifacts, then all work within 100 feet of the discovery shall cease, the Economic and Community Development Department shall be notified, the resources shall be examined by a qualified archaeologist for appropriate protection and preservation measures; and work may only resume when appropriate protections are in place and have been approved by the Economic and Community Development Department.

Policy ES-11.1 Identification of tribal cultural resources. Encourage the identification, preservation, and protection of tribal cultural resources, traditional cultural landscapes, sacred sites, places, features, and objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites in consultation or coordination with the appropriate Native America tribe(s), and shall ensure appropriate treatment of Native American and other human remains discovered during project construction.

Policy ES-11.2 Include history of Native American peoples in Colma Creek transformation. Include the history of Native American peoples and cultural resources as part of the transformation of Colma Creek.

Policy ES-11.3 Conduct tribal consultation during development review. Consult with local Native American tribes to identify, evaluate, and appropriately address tribal cultural resources and tribal sacred sites through the development review process.

Sub-Areas Element

Policy SA-2.2 Protect historic buildings. Protect historic buildings and the local building fabric in the Downtown through adaptive reuse and other strategies.

Policy SA-6.1 Develop new buildings to be compatible with Downtown building scale and character. Ensure new buildings are developed at a scale and in a character compatible with Downtown's existing historical and physical context.

Policy SA-33.3 Preserve the federally-designated Sign Hill historic site. Preserve the federally-designated Sign Hill historic site.

South San Francisco Municipal Code

2.56.080 Historic Preservation Findings and Purposes.

Section 2.56.080 of the Municipal Code states the following:

a) It is hereby found that structures, sites and areas of special character or special historical, architectural, or aesthetic interest or value have been and continue to be unnecessarily destroyed, impaired or neglected despite the feasibility of preserving them.

b) It is further found that the prevention of such needless destruction and impairment is essential to the health, safety and general welfare of the citizens of the City of South San Francisco.

c) The purpose of Sections 2.56.080 through 2.56.210 is to promote the health, safety and general welfare of the citizens of the City of South San Francisco through:

   (1) The identification, protection, enhancement, perpetuation and use of structures, sites and areas that are reminders of past eras, events and persons important to local, State or national history, or which provide significant examples of architectural styles of the past or are elements in the history of architecture or which are unique and irreplaceable assets to the City of South San Francisco and its neighborhoods, or which provide for this and future generations examples of the physical surroundings in which past generations lived.

   (2) The development and maintenance of appropriate settings and environments for such structures, in such sites and areas.

   (3) The enhancement of property values, the stabilization of neighborhoods and areas of the City, and the increase of economic and financial benefits to the City and its inhabitants.

   (4) The preservation and encouragement of a city of varied architectural styles, reflecting the distinct phases of its history: cultural, social, economic, political and architectural.

(5) The enrichment of human life in its educational and cultural dimensions in order to serve spiritual as well as material needs by fostering knowledge of the living heritage of the past. (Ordinance 1440 § 2, 2011)

Section 2.56.110. Criteria for Historic Designation.

Section 2.56.110 of the Municipal Code states that the Planning Commission is granted responsibility for designating historic resources. In considering a proposal for designation, the commission shall apply any or all of the following criteria:

a) Its character, interest or value as a significant part of the heritage of the City, the State or the nation.

b) Its location as a site of a significant historic event.

c) Its identification with a person or persons who significantly contributed to the culture and development of the City, the State, or the nation.

d) Its exemplification of a particular architectural style or way of life.

e) Its exemplification of the best remaining example of a particular architectural type in the City.

f) Its identification as the creation, design or work of a person or persons whose efforts have significantly influenced the heritage of the City, the State, or the nation.

g) Its embodiment of elements demonstrating outstanding attention to artistic, architectural and/or engineering design, detail, materials, or craftsmanship.

h) Its relationship to any other historic resource if its preservation is essential to the integrity of the other historic resource (for example, it is a clearly identified element of a larger cohesive neighborhood or area whose integrity and character should be protected, such as the civic center, downtown, or a specific residential neighborhood).

i) Its unique location or singular physical characteristics representing an established and familiar visual feature of the City.

j) Its potential of yielding significant information of archaeological interest.

k) Its integrity as a natural environment that strongly contributes to the well-being of the people of the City, the State, or the nation. For example, an area retained in or developed in a natural setting, such as portions of Sign Hill, or some other feature which contributes to the quality of life in South San Francisco. (Ordinance 1440 § 2, 2011).

Section 2.56.130 Certificate of Alteration

Section 2.56.130 of the Municipal Code requires a Certificate of Alteration prior to issuance of a building permit for any projects impacting a designated historic resource. All proposed work is to be reviewed for conformance with the Secretary of the Interior's Guidelines for Rehabilitation. An application for such Certificate of Alteration is reviewed and issued by the City's Planning Commission under Chapter 2.56.

City of South San Francisco Zoning Ordinance

The following chapters of the South San Francisco Zoning Ordinance, including the new or revised chapter of the Zoning Ordinance that are part of the proposed project, assist in reducing or avoiding impacts related to cultural and tribal cultural resources.

Chapter 20.080 Downtown Residential Districts (existing)

The purpose of this chapter is to promote and maintain Downtown's historic role as the City's center by developing a variety of residential types and densities consistent with the policies of the General Plan and complementary to the goals and policies of the Downtown Station Area Specific Plan District.

Chapter 20.090 Downtown Station Area Zoning Districts (existing)

The purpose of this chapter is to focus new improvements on Grand Avenue to return this historic corridor to once again being the focus of the community, encourage the retention of existing and local businesses to the Downtown, and protect existing historic building fabric.

Chapter 20.110 Civic Districts (existing)

Section 20.110.004 (Supplemental Regulations) (existing) states that open space uses allowed within the Terrabay Preservation Parcel must be in conformance with the General Plan and the Mutual Release and Settlement Agreement executed in March 2000 between Terrabay Partners. L.L.C., Myers/Sunchase I, L.L.C., The Center for Biological Diversity, San Bruno Mountain Watch and the City of South San Francisco, including wetlands preservation and mitigation, habitat preservation, and preservation of archaeological resource site CA-SMa-40.

Chapter 20.360 Sign (revised)

The purpose of this chapter is to ensure that all signs are compatible with the unique character and environment of the City and that they support the desired ambience and development patterns of the various districts and historic areas within the City.

Section 20.360.008 (Nonconforming Signs) (revised) states that signs which reflect the unique historical characteristics of the development and heritage of South San Francisco may remain, subject to continued maintenance, until the use of the site on which the sign is located changes, subject to Planning Commission approval.

Historic Preservation Ordinance

The City's historic preservation program formally began in 1986 with the adoption of the Historic Preservation Ordinance by City Council. Pursuant to the Ordinance, a historic preservation commission was designated to identify South San Francisco's most important historic sites and structures, and protect them from neglect, exterior alteration, and demolition. The historic properties were referred to as Historic Resources. In 2011, the historic preservation responsibilities were transferred to the Planning Commission (Ordinance 1440-2011).

Historic Marker Program

The Historic Marker Program was developed to identify historically or culturally significant sites throughout the City. There are currently 50 such sites, each having a marker describing its significance as part of the history of the City.

3.4.4 - Methodology

Data to inform this section was obtained from the Northwest Information Center (NWIC) and City records. Information obtained at the NWIC included records for all cultural resources located within the City that are recorded on the City Historic Resources Inventory List, and the Office of Historic Preservation Directory of Properties in the Historic Property Data File for San Mateo County. Ethnographic resources were also reviewed for information regarding reported Native American village sites located within the City. The information in this section is based, in part, on the South San Francisco Historic Resources Survey, dated June 2022, and the South San Francisco General Plan Update, Cultural and Historic Resources Existing Conditions Report, dated December 2019, which are included in Appendix D.

On January 14, 2022, in accordance with requirements promulgated by SB 18 and AB 52, the City notified the Amah Mutsun Tribal Band, the Coastanoan Rumsen Carmel Tribe, the Indian Canyon Mutsun Band, the Muwekma Ohlone Indian Tribe of San Francisco Bay, and the Ohlone Indian Tribe of the proposed project and invited the tribes to participate in consultation (see Appendix D). On April 6, 2022, in accordance with requirements promulgated by SB 18 and AB 52, the City notified the Wuksache Indian Tribe/Eshom Valley Band of the proposed project and invited the tribe to participate in consultation (see Appendix D). As of June 6, 2022, no responses have been received.

3.4.5 - Thresholds of Significance

According to CEQA Guidelines Appendix G Environmental Checklist, to determine whether impacts related to cultural resources and TCRs result in significant environmental effects, the following questions are analyzed and evaluated. Would the proposed project:

a) Cause a substantial adverse change in the significance of a historical resource as pursuant to Section 15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

c) Disturb any human remains, including those interred outside of formal cemeteries?

d) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

e) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is

geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?

3.4.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where appropriate.

Historic Resources

Impact CUL-1: The proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.

A substantial adverse change in the significance of a historical resource is defined at Section 15064.5(b)(1) of the CEQA Guidelines as the "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired." Known historic buildings, districts and resource sites are located throughout the Planning Area (see Exhibit 3.4-1, Exhibit 3.4-2, Exhibit 3.4-3, Exhibit 3.4-4a, Exhibit 3.4-4b, and Exhibit 3.4-4c). Additional undesignated sites, and potentially unidentified sites, exist within the Planning Area as well.

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. Because South San Francisco is a fully built City, new development would primarily occur on parcels that contain existing homes or businesses, which could potentially be historic resources, with the majority of potential growth occurring within the East of 101, Lindenville, Downtown, and El Camino planning sub-areas (Chapter 2, Project Description, Exhibit 2-5). Additionally, the proposed project may result in other private and public improvements throughout the City that have the potential for environmental effects related to historic resources (see Chapter 2, Project Description, Sections 2.5.2, 2.5.5, and 2.5.6). Therefore, subsequent development under the proposed project could affect known historic resources or previously unidentified or undesignated resources.

The General Plan Update includes policies and actions specifically designed to address the conservation and protection of historical resources. Policy SA-2.2 requires the City to protect historic buildings and the local building fabric in the Downtown through adaptive reuse and other strategies. Policy SA-6.1 requires that new buildings are developed at a scale and in a character compatible with Downtown's existing historical and physical context. Policy SA-33.3 requires the City to preserve the federally designated Sign Hill historic site. Policy ES-9.1 requires the City to maintain and update a Historic Resources Inventory to promote awareness of these community resources and as a tool to further their preservation. Action ES-9.1.1 requires the City to explore the feasibility of establishing a Downtown South San Francisco Historical Commercial District and Action ES-9.1.2 requires the City to prepare Downtown urban design guidelines and require design review of developments in the proposed Downtown South San Francisco Historical Commercial District to ensure that the height, massing, and design of buildings furthers Downtown's character. Policy ES-9.3 requires the City to

promote the adaptive use of historic resources, particularly as inns, vacation rentals, light commercial use, museums, educational facilities, or visitor-serving uses, when the original use can no longer be sustained. Policy ES-9.4 requires the City to protect and preserve historic sidewalk stamps, street signs, lampposts, street trees, and other hardscape and cultural landscape elements, in addition to designated historical buildings, structures, and sites that contribute to the historic character of a neighborhood, and the City. Finally, Policy ES-9.5 requires the preparation and submittal of historic reports and surveys as part of the environmental review process. There are no actions identified in the Climate Action Plan related to historic resources.

The South San Francisco Municipal Code contains rules and regulations that protect historical resources. Section 2.56.080 of the Municipal Code requires the identification, protection, enhancement, perpetuation and use of structures, sites and areas that are reminders of past eras, events and persons important to local, State or national history, or which provide significant examples of architectural styles of the past or are elements in the history of architecture. Section 2.56.110 grants the responsibility for designating historic resources to the Planning Commission and establishes criteria for historic designation. Section 2.56.130 requires a Certificate of Alteration prior to issuance of a building permit for any projects impacting a designated historic resource. In accordance with Section 2.56.130, all proposed work must be reviewed for conformance with the Secretary of Interior's Guidelines for Rehabilitation.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, include rules and regulations related to historic resources. Chapter 20.080 Downtown Residential Districts (existing) promotes and maintains the Downtown's historic role as the City's center by developing a variety of residential types and densities consistent with the policies of the General Plan and complementary to the goals and policies of the Downtown Station Area Specific Plan District. Chapter 20.090 Downtown Station Area Zoning Districts (existing) focuses new improvements on Grand Avenue to return this historic corridor to once again being the focus of the community and encourage the retention of existing and local businesses to the Downtown and protect existing historic building fabric. Section 20.360.008 (Nonconforming Signs) (revised) states that signs which reflect the unique historical characteristics of the development and heritage of South San Francisco may remain, subject to continued maintenance, until the use of the site on which the sign is located changes, subject to Planning Commission approval.

As the City receives development applications for subsequent development under the proposed project, those applications will be reviewed by the City of South San Francisco for compliance with the policies and actions of the General Plan Update related to the protection of historical resources. The City's Municipal Code and Zoning Ordinance, which implement the City's General Plan would be reviewed when development applications are received.

In conclusion, development envisioned by the proposed project could result in an increase in new residential and nonresidential development, as well as other public improvements, that could affect known historic resources or previously unidentified or undesignated historic resources within the Planning Area. However, compliance with General Plan Update policies and actions would ensure that future development projects are appropriately reviewed in terms of potential impacts to historic resources. Consistent with the South San Francisco Municipal Code Section 2.56.130, any

projects impacting a designated historic resource requires a Certificate of Alteration prior to issuance of a building permit and all proposed work is to be reviewed for conformance with the Secretary of the Interior's Guidelines for Rehabilitation. Lastly, individual development projects which propose to alter a building or structure greater than 45 years of age at the time an application is deemed complete would be required to undergo project-specific environmental review in compliance with CEQA Guidelines Section 15064.5, in order for the City to determine whether the building or structure may be a historic resource, and take appropriate action such as requiring additional site-specific or project-specific measures to reduce any potential impacts. Therefore, future development under the proposed project would not result in significant adverse effects to historical resources and impacts would be less than significant.

Level of Significance

Less than significant impact.

Archaeological Resources

Impact CUL-2: The proposed project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

Based on a review of information available at the NWIC, areas of the Planning Area have been previously surveyed for archaeological resources. Known archaeological resource sites are located within the Planning Area (see Table 3.4-7 and Table 3.4-8). Some of South San Francisco's known archaeological resources are located within areas undergoing development, such as Terrabay and El Camino Real. Additionally, undiscovered archaeological sites could exist in the Planning Area.

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. Because South San Francisco is a fully built City, new development would primarily occur on parcels that already contain some existing homes or businesses, with the majority of potential growth occurring within the East of 101, Lindenville, Downtown, and El Camino planning sub-areas (Chapter 2, Project Description, Exhibit 2-5).

Additionally, the General Plan Update may result in other private and public improvements throughout the City with the potential for environmental effects related to archaeological resources (see Chapter 2, Project Description, Sections 2.5.2, 2.5.5, and 2.5.6). Therefore, subsequent development under the proposed project could affect known archaeological resources or previously unidentified or undesignated archaeological resources.

The potential for additional archaeological sites to be present within the City exists but varies by location. Prehistoric habitation sites, such as those known to be present within the City, tend to be situated along creeks and other areas with a reliable water supply, whereas task-specific sites or resource procurement sites can be situated in almost any environment conducive to human activity. Buried prehistoric archaeological sites tend to be found on Holocene-age landforms, particularly alluvial fans, floodplains, and areas along rivers and streams. As such, within the Planning Area, the waterfront and the areas around Colma Creek and San Bruno Creek have the greatest potential for buried prehistoric archaeological resources to be present.

The General Plan Update includes policies and actions specifically designed to address potential impacts to archaeological resources. Policy ES-10.1 requires the City to maintain formal procedures for minimizing and mitigating impacts to archaeological resources and Policy ES-10.2 requires the City to support educational efforts that increase community awareness, appreciation, and support for South San Francisco's archaeological resources. Policy ES-10.3 requires that development proposals be referred to the NWIC of the California Archaeological Inventory, NAHC, and local Native American tribes, for review and recommendations regarding supplemental field investigation. Policy ES-10.4 requires a records review for any development proposed in areas of known archaeological resources. Lastly, as required by Policy ES-10.5, if construction or grading activities result in the discovery of significant historic or prehistoric archaeological artifacts, then all work within 100 feet of the discovery shall cease, the Economic and Community Development Department shall be notified, and the resources shall be examined by a qualified archaeologist for appropriate protection and preservation measures. As stipulated by Policy ES-10.5, work may only resume when appropriate protections are in place and the protections have been approved by the Economic and Community Development Department. There are no actions identified in the Climate Action Plan related to archaeological resources.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, include rules and regulations related to archaeological resources. Section 20.110.004 (Supplemental Regulations) (existing) states that open space uses allowed within the Terrabay Preservation Parcel must be in conformance with the General Plan and the Mutual Release and Settlement Agreement executed in March 2000 between Terrabay Partners. L.L.C., Myers/Sunchase I, L.L.C., The Center for Biological Diversity, San Bruno Mountain Watch and the City of South San Francisco, including wetlands preservation and mitigation, habitat preservation, and preservation of archaeological resource site CA-SMa-40.

As the City receives development applications for subsequent development under the proposed project, those applications would be reviewed by the City for compliance with the policies and actions of the General Plan Update as well as the regulations of the Zoning Ordinance related to archaeological resources. In particular, proposed new development would be required to conduct a records search with the NWIC to determine the archaeological sensitivity of the site, as well as be referred to the NAHC and local Native American tribes. If required, an archaeological survey of the site would be conducted and/or accidental discovery procedures for archaeological resources would be required. In addition, proposed new development would be required to preserve archaeological resource site CA-SMa-40.

In conclusion, development envisioned by the proposed project could result in new residential and nonresidential development, as well as other public improvements, that could affect known or previously unidentified archaeological resources within the Planning Area. However, compliance with General Plan Update policies and actions and the regulations of the Zoning Ordinance would ensure that future development projects are appropriately reviewed and designed in terms of potential impacts to archaeological resources. Consistent with the General Plan Update policies and actions, individual development projects would be required to undergo project-specific environmental review, which may require additional site-specific or project-specific measures to reduce any potential impacts and would ensure that impacts remain less than significant.

Level of Significance

Less than significant impact.

Human Remains

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

Excavation and construction activities allowed under the proposed project may uncover human remains that may not be marked in formal burial locations. Therefore, as future development and infrastructure projects are reviewed by the City, each project would be evaluated for conformance with the General Plan Update, South San Francisco Municipal Code, and other applicable State regulations. Under CEQA, human remains are protected under the definition of archaeological materials as being "any evidence of human activity."

Public Resources Code Section 5097 has specific stop-work and notification procedures to follow when Native American human remains are inadvertently discovered during excavation and construction activities. Section 7050.5 of the California Health and Safety Code sets forth provisions related to the treatment of human remains, including the treatment of human remains found in locations other than a dedicated cemetery and the responsibilities of the Coroner. These requirements apply to all construction projects within the Planning Area.

The General Plan Update includes policies and actions intended to conserve and reduce impacts to archaeological resources, including human remains. Policy ES-11.1 requires the City to identify, preserve, and protect TCRs, traditional cultural landscapes, sacred sites, places, features, and objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites in consultation or coordination with the appropriate Native America tribe(s). Policy ES-11.1 further requires the appropriate treatment of Native American and other human remains discovered during project construction. There are no regulations identified in the Zoning Code Amendments and no actions identified in the Climate Action Plan related to the inadvertent discovery of human remains during excavation and construction activities.

Implementation of policies and actions in the General Plan Update, as well as compliance with adopted State, federal and local regulations for the protection of archaeological resources and human remains, would ensure that future development under the proposed project would not result in significant adverse effects to human remains. Therefore, impacts would be considered less than significant.

Level of Significance

Less than significant impact.

Significance of Tribal Cultural Resource and Eligibility for California Register Listing

Impact CUL-4: The proposed project would not cause a substantial adverse change in the significance of a Tribal Cultural Resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).

On February 15, 2022, a letter was sent to the NAHC to determine whether any sacred sites are listed on its Sacred Lands File for the Planning Area. A response was received on March 27, 2022, indicating the search returned negative results for TCRs in the Planning Area (see Appendix D). A records search conducted at the NWIC identified 15 listed prehistoric sites that meet the definition of a TCR within the Planning Area. It is always possible that subsurface excavation activities may encounter previously undiscovered TCRs. Therefore, any unidentified TCRs could be adversely affected by development under the proposed project and create a potentially significant impact.

While the proposed project does not directly propose any adverse changes to any recorded TCRs, future development allowed under the proposed project could affect known or previously unidentified TCRs. In addition, the potential for additional undiscovered eligible TCRs to be present within the Planning Area exists but varies by location. As with prehistoric archaeological resources, the waterfront and the areas around Colma Creek and San Bruno Creek have the greatest potential for buried TCRs to be present.

The General Plan Update includes policies and actions intended to conserve and reduce impacts to TCRs. Policy ES-11.1 requires the City to identify, preserve, and protect TCRs, traditional cultural landscapes, sacred sites, places, features, and objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites in consultation or coordination with the appropriate Native America tribe(s). Policy ES-11.3 requires the City to Consult with local Native American tribes to identify, evaluate, and appropriately address TCRs and tribal sacred sites through the development review process. There are no regulations identified in the Zoning Code Amendments and no actions identified in the Climate Action Plan related to TCRs.

The General Plan Update also includes policies and actions intended to conserve and reduce impacts to archaeological resources, which can include TCRs. Policy ES-10.3 requires that development proposals be referred to the NWIC of the California Archaeological Inventory, NAHC, and local Native American tribes, for review and recommendations regarding supplemental field investigation. Policy ES-10.4 requires a records review for any development proposed in areas of known archaeological resources. As required by Policy ES-10.5, if construction or grading activities result in the discovery of significant historic or prehistoric archaeological artifacts, then all work within 100 feet of the discovery shall cease, the Economic and Community Development Department shall be notified, and the resources shall be examined by a qualified archaeologist for appropriate protection and preservation measures. As stipulated by Policy ES-10.5, work may only resume when appropriate protections are in place and the protections have been approved by the Economic and Community Development Department.

By adhering to the policies and actions in the General Plan Update, as well as the provisions under SB 18 and AB 52, potential impacts to existing or undiscovered eligible TCRs within the Planning Area would be reduced to less than significant.

Level of Significance

Less than significant impact.

Significance of Tribal Cultural Resource and Eligibility as Determined by Lead Agency

Impact CUL-5:	**The proposed project would not cause a substantial adverse change in the significance of a Tribal Cultural Resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.**

On February 15, 2022, a letter was sent to the NAHC to determine whether any sacred sites are listed on its Sacred Lands File for the project area. A response was received on March 27, 2022, indicating the search returned negative results for TCRs in the Planning Area, and recommended contacting tribal representatives from six tribes for additional information (see Appendix D).

On January 14, 2022, in accordance with requirements promulgated by SB 18 and AB 52, the City notified the Amah Mutsun Tribal Band, the Coastanoan Rumsen Carmel Tribe, the Indian Canyon Mutsun Band, the Muwekma Ohlone Indian Tribe of San Francisco Bay, and the Ohlone Indian Tribe of the proposed project and invited the tribes to participate in consultation (see Appendix D). On April 6, 2022, in accordance with requirements promulgated by SB 18 and AB 52, the City notified the Wuksache Indian Tribe/Eshom Valley Band of the proposed project and invited the tribe to participate in consultation (see Appendix D). As of June 6, 2022, no responses have been received.

At this time, the City, in its capacity as Lead Agency, has not identified TCRs throughout various sites in the Planning Area pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1 that would be adversely impacted by the proposed project. Nonetheless, as described under Impact CUL-4, future development allowed under the proposed project could affect previously unidentified TCRs.

As discussed under Impact CUL-4, the General Plan Update includes policies and actions to conserve and reduce impacts to TCRs, such as Policy ES-11.1, Policy ES-11.3, Policy ES-10.3, and Policy ES-10.5. By adhering to the policies and actions in the General Plan Update, as well as the provisions under SB 18 and AB 52, potential impacts to existing or undiscovered eligible TCRs within the Planning Area would be reduced to less than significant.

Level of Significance

Less than significant impact.

3.4.7 - Cumulative Impacts

The geographic scope of the cumulative impact analysis for cultural and TCRs is the South San Francisco Planning Area as well as the surrounding cities of Brisbane, Daly City, Pacifica, San Bruno, and Millbrae. This analysis evaluates whether the impacts of the proposed project, together with the impacts of cumulative development, would result in a cumulatively significant impact on cultural and TCRs. This analysis then considers whether incremental contribution to cumulative impacts

associated with the implementation of the proposed project would be significant. Both conditions must apply for a project's cumulative effects to rise to the level of significance.

Future development within the cumulative geographic scope could have significant cumulative impacts on known or previously unidentified cultural and TCRs. However, development within the cumulative geographic context would be required to comply with federal, State, and local laws and policies that protect cultural and TCRs, including the provisions of SB 18 and AB 52, Section 15064.5 of the CEQA Guidelines, Section 7050.5 of the California Health and Safety Code, and Sections 5024.1 and 5097 of the Public Resources Code. Compliance with these policies may also require development projects to prepare site-specific project-level analysis to fulfill CEQA requirements, which also would include additional consultation that could lead to the identification of potential site-specific cultural and TCRs. Accordingly, because cumulative development would be required to comply with long-term planning documents, and regulatory agency policies (including, but not limited to, evaluation requirements and inadvertent discovery procedures) that reduce impacts to potential cultural and TCRs, cumulative impacts would be less than significant.

Moreover, the proposed project's incremental contribution to these less than significant cumulative impacts would not be significant with implementation of the policies and actions proposed in the General Plan Update. As analyzed above, General Plan Update Policy ES-9.5 requires the preparation and submittal of historic reports and surveys as part of the environmental review process. Policy ES-10.3 requires that development proposals be referred to the NWIC of the California Archaeological Inventory, NAHC, and local Native American tribes, for review and recommendations regarding supplemental field investigation. Policy ES-10.4 requires a records review for any development proposed in areas of known archaeological resources. As required by Policy ES-10.5, if construction or grading activities result in the discovery of significant historic or prehistoric archaeological artifacts, then all work within 100 feet of the discovery shall cease, the City's Economic and Community Development Department shall be notified, and the resources shall be examined by a qualified archaeologist for appropriate protection and preservation measures. Lastly, Policy ES-11.1 requires the City to identify, preserve, and protect TCRs, traditional cultural landscapes, sacred sites, places, features, and objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites in consultation or coordination with the appropriate Native America tribe(s).

As discussed under Impacts CUL-1 through CUL-5, as the City receives development applications for subsequent development under the proposed project, those applications would be reviewed by the City for compliance with the policies and actions of the General Plan Update, the provisions of SB 18 and AB 52, the South San Francisco Municipal Code, and other relevant federal, State, and local regulations that protect cultural and TCRs, including Section 15064.5 of the CEQA Guidelines and Sections 5024.1 and 5097 of the Public Resources Code.

Other municipalities within the cumulative geographic context have adopted similar policies to preserve and protect known or previously unidentified cultural and TCRs. Therefore, cumulative impacts from implementation of the proposed project would not result in a considerable incremental contribution to cumulative impacts to cultural and TCRs. In addition, the General Plan Update contains policies and actions to protect cultural and TCRs, and future development within the cumulative geographic context would be required to comply with regulations set forth by local,

State, and federal agencies to protect cultural and TCRs. Therefore, the proposed project's contribution to cumulative impacts would be less than significant.

Level of Cumulative Significance

Less than significant impact.

Source: South San Francisco General Plan Update: Cultural Resources Existing Conditions Report. July, 2019

Exhibit 3.4-1
National and California
Register Listed Properties

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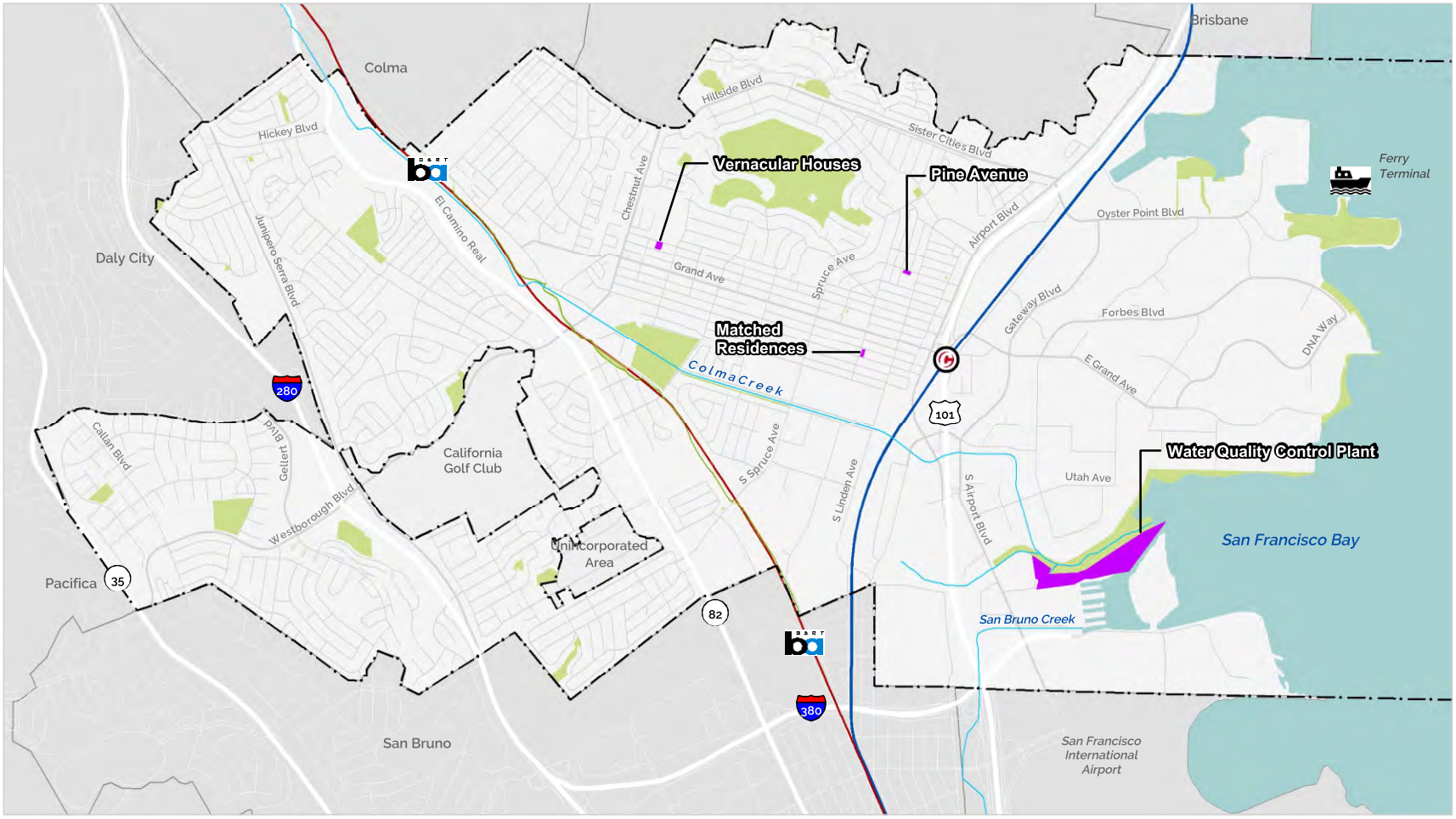

Source: SHAPE South San Francisco, November 2019.

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Exhibit 3.4-2
Potential Historic Resources

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Jurisdictional Boundary

- City of South San Francisco
- Other City Boundaries
- Sphere of Influence

Transportation Features

- BART
- Caltrain
- Highway
- Arterial
- Local Street

Legend

- Grand Avenue Commercial Historic District
- Streams
- Centennial Way Trail

3,000 1,500 0 3,000 Feet

Source: SHAPE South San Francisco, November 2019.

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Exhibit 3.4-3
Historic District

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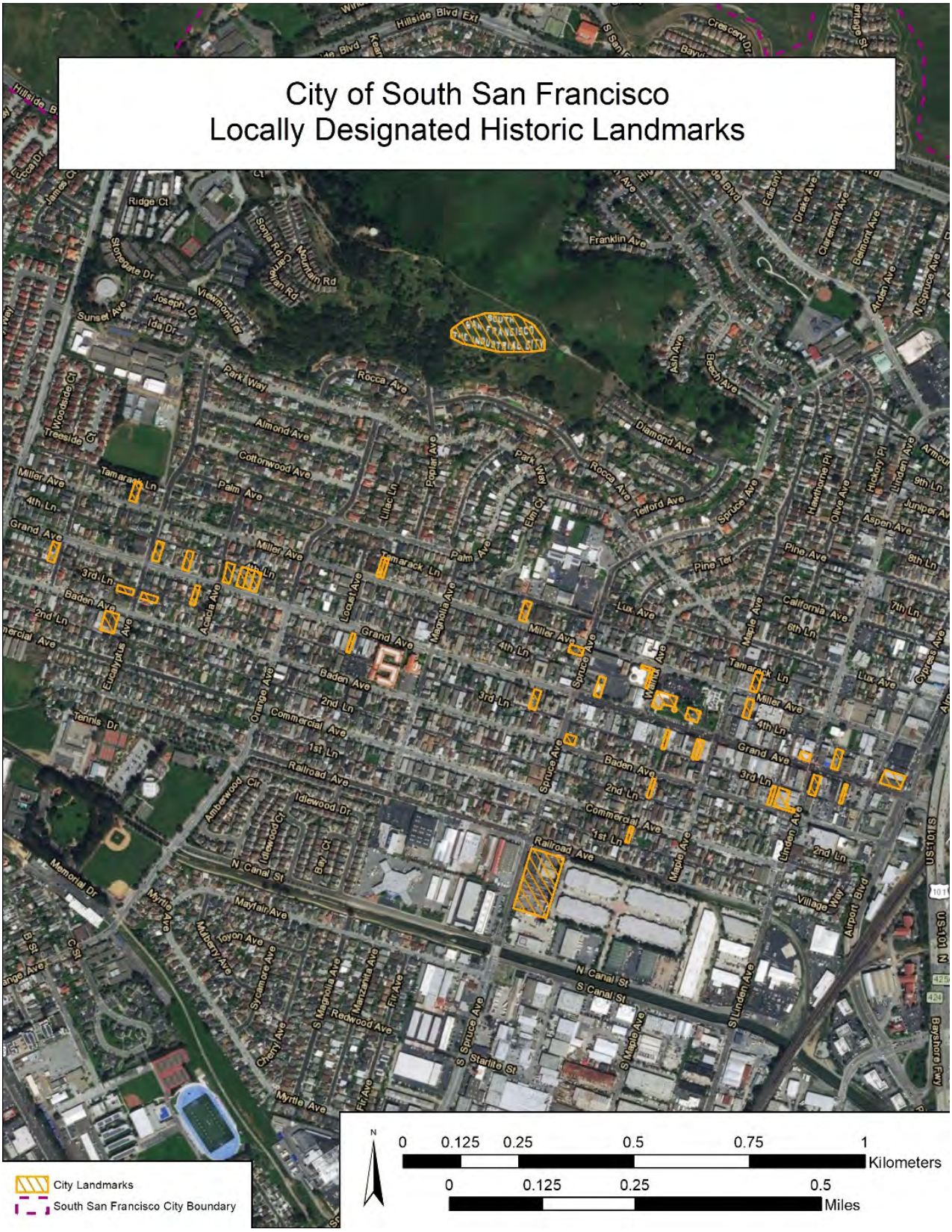

Source: South San Francisco General Plan Update: Cultural Resources Existing Conditions Report. July, 2019

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Exhibit 3.4-4a
Overview of Locally Designated Historic Landmarks

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Source: South San Francisco General Plan Update: Cultural Resources Existing Conditions Report. July, 2019

Exhibit 3.4-4b
Detail of Locally Designated Historic Landmarks (West Downtown)

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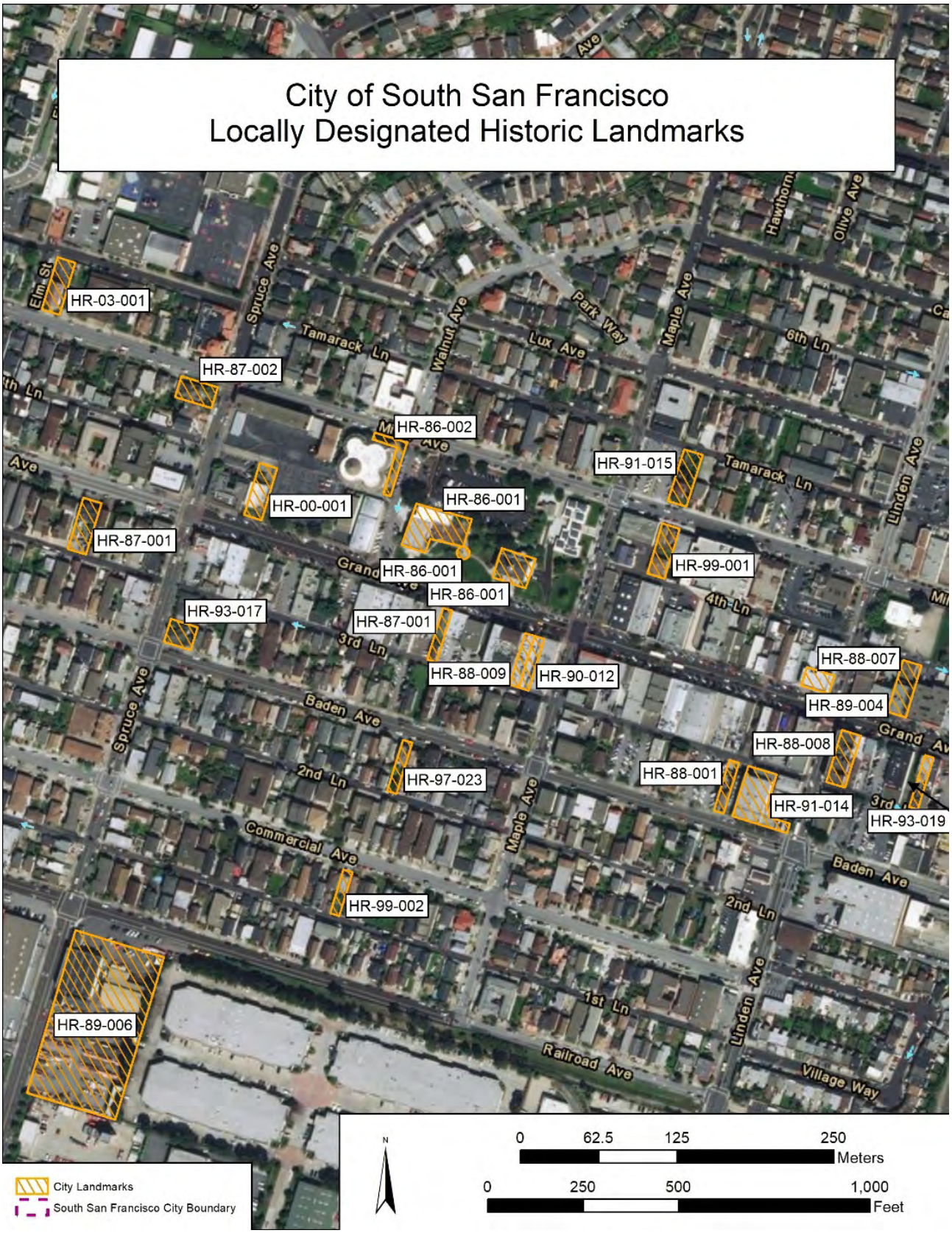

Source: South San Francisco General Plan Update: Cultural Resources Existing Conditions Report. July, 2019

Exhibit 3.4-4c
Detail of Locally Designated Historic Landmarks (East Downtown)

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3.5 - Energy

3.5.1 - Introduction

This section of the Draft Program Environmental Impact Report (Draft Program EIR) addresses the potential environmental effects related to inefficient, wasteful, and unnecessary consumption of energy resources within the South San Francisco General Plan Update Planning Area (Planning Area) resulting from implementation of the General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project). This section also addresses the proposed project's potential to conflict with or obstruct State or local plans for renewable energy or energy efficiency. Future discretionary projects facilitated by the proposed project will be evaluated for project-specific impacts related to energy at the time they are proposed. Energy consumption as an environmental impact is also evaluated and discussed in other sections of the Draft Program EIR, including Section 3.2, Air Quality; Section 3.7, Greenhouse Gas Emissions; Section 3.14, Transportation; and Section 3.15, Utilities and Service Systems. See Appendix B for supporting information.

No comments related to Energy were received in response to the Notice of Preparation (NOP).

The descriptions and analysis in this section are based, in part, on statements, data, and figures provided by the following reference materials:

- South San Francisco General Plan Update
- Peninsula Clean Energy
- Pacific Gas & Electric Company
- California Energy Commission
- California Public Utilities Commission

3.5.2 - Environmental Setting

Energy resources include electricity, natural gas, and other fuels. The production of electricity and other usable energy often requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into usable energy. Energy production and use can each result in the depletion of nonrenewable resources (e.g., oil, natural gas, coal, etc.) and emission of pollutants.

Energy usage related to the proposed project includes direct consumption for heating and cooling, electric facilities, and lighting. Indirect energy consumption is associated with the generation of electricity at power plants. Transportation-related energy consumption includes the use of fuels and electricity to power cars, trucks, and public transportation. Energy is also consumed by equipment and vehicles used during project construction and routine maintenance activities.

Electricity

Electricity, a consumptive utility, is a man-made resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar,

geothermal, and nuclear resources, into energy. The delivery of electricity involves several system components, including substations and transformers that lower transmission line power (voltage) to a level appropriate for on-site distribution and use. The electricity generated is distributed through a network of transmission and distribution lines commonly called a power grid. Conveyance of electricity through transmission lines is typically responsive to market demands.

Energy capacity, or electrical power, is generally measured in watts while energy use is measured in watt-hours. For example, if a light bulb has a capacity rating of 100 watts, the energy required to keep the bulb on for 1 hour would be 100 watt-hours. If 10 100-watt bulbs were on for 1 hour, the energy required would be 1,000 watt-hours or 1 kilowatt-hour (kWh). On a utility scale, a generator's capacity is typically rated in megawatts, which is a million watts, while energy usage is measured in megawatt-hours or gigawatt-hours (GWh), which is one billion watt-hours.

Pacific Gas and Electric Company's (PG&E) service area stretches from Eureka in the north to Bakersfield in the south, and from the Pacific Ocean in the west to the Sierra Nevada Mountains in the east. PG&E owns and maintains 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines. Approximately 5.4 million electric customer accounts are served by PG&E.[1] In 2018, PG&E provided approximately 80,369 GWh of electricity to its customers. Electricity consumption within PG&E's service area by sector is displayed in Table 3.5-1. Electricity consumption within San Mateo County for 2020 is displayed in Table 3.5-2.

Table 3.5-1: Electricity Consumption Within PG&E's Service Area (2020)

Energy Usage Category	GWh	Percent
Industry	9,814.34	12.5%
Commercial	30,195.35	38.4%
Residential	29,833.54	38.0%
Mining and Construction	1,747.64	2.2%
Agriculture and Water Pumping	6,637.59	8.5%
Street Lighting	290.38	0.4%

Notes:
GWh = gigawatt-hours
Source: California Energy Commission. Electricity Consumption by Entity. Website: http://www.ecdms.energy.ca.gov/elecbyutil.aspx. Accessed April 19, 2022.

Table 3.5-2: Electricity Consumption Within San Mateo County (2020)

Energy Usage Category	GWh	Percent
Nonresidential	2,515.60	60.3%
Residential	1,651.91	39.7%

[1] Pacific Gas and Electric Company. 2022. Company Profile. Website: https://www.pge.com/en_US/about-pge/company-information/profile/profile.page. Accessed April 19, 2022.

Energy Usage Category	GWh	Percent
Total	4,167.51	100.0%
Notes: GWh = gigawatt-hours Source: California Energy Commission. Electricity Consumption by Entity. Website: https://ecdms.energy.ca.gov/elecbycounty.aspx. Accessed April 19, 2022.		

The electrical power distribution within the City of South San Francisco is owned and operated by PG&E. The electrical power grid consists of both overhead and underground electrical lines.

Provision of electricity is through PG&E with the option of purchasing electricity through Peninsula Clean Energy, which is delivered by PG&E.[2] Peninsula Clean Energy is a community-controlled, not-for-profit electricity provider that has been serving the City since 2016. Peninsula Clean Energy's service area includes all of San Mateo County and the City of Los Banos. Peninsula Clean Energy customers have the option of receiving 50 percent or 100 percent renewable energy from sources like solar of wind power.[3] All businesses and residents are automatically enrolled in the Peninsula Clean Energy program but can opt out of the program to purchase electricity from PG&E at any time.

Natural Gas

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

Natural gas is provided to the City of South San Francisco through PG&E. PG&E provides natural gas services within 48 counties in California with a total service area of approximately 70,000 square miles in northern and central California. PG&E provides services with 42,141 miles of natural gas distribution pipelines and 6,438 miles of transportation pipelines. PG&E serves approximately 4.3 million natural gas distribution customers.[4] One therm is approximately 100 cubic feet of natural gas. In 2018, PG&E provided and distributed approximately 4,794 million therms of natural gas to its customers. Natural gas consumption within PG&E's service area by sector is displayed in Table 3.5-3 Natural gas consumption within San Mateo County for 2020 is displayed in Table 3.5-4.

Table 3.5-3: Natural Gas Consumption Within PG&E's Service Area (2020)

Energy Usage Category	GWh	Percent
Industry	1,585.35	35.2%

[2] City of South San Francisco. Community Choice Energy. Website: https://www.ssf.net/departments/city-manager/sustainability/community-choice-energy. Accessed April 21, 2022.
[3] Peninsula Clean Energy. Energy Choice. Website: https://www.peninsulacleanenergy.com/energy-choices/. Accessed April 19, 2022.
[4] Pacific Gas and Electric Company (PG&E). 2020. Company Profile. Website: https://www.pge.com/en_US/about-pge/company-information/profile/profile.page. Accessed April 19, 2022.

Energy Usage Category	GWh	Percent
Commercial	847.91	18.8%
Residential	1,891.28	41.9%
Mining and Construction	139.96	3.1%
Agriculture and Water Pumping	44.036	1.0%

Notes:
GWh = gigawatt-hours
Source: California Energy Commission (CEC). Gas Consumption by Entity. Website: http://www.ecdms.energy.ca.gov/gasbyutil.aspx. Accessed April 19, 2022.

Table 3.5-4: Natural Gas Consumption Within San Mateo County (2020)

Energy Usage Category	GWh	Percent
Nonresidential	82.31	41.1%
Residential	118.00	58.9%
Total	200.30	100.0%

Notes:
GW = gigawatt-hours
Source: California Energy Commission. Gas Consumption by County. Website: http://www.ecdms.energy.ca.gov/gasbycounty.aspx. Accessed April 19, 2022.

California Energy Consumption

According to the California Energy Commission (CEC), total system electric generation for California in 2020 was 272,576 GWh.[5] California's in-State electric generation was 190,913 GWh and electricity imports were 81,663 GWh. California's non-carbon dioxide (CO_2) emitting electric generation categories (biomass, geothermal, small hydroelectric, solar, and wind), which generated 63,665 GWh, accounted for 33 percent of total in-State generation for 2019. The in-State renewable generation included 29,456 GWh from solar, 13,708 GWh from wind, 11,345 GWh from geothermal, 5,680 GWh from biomass, and 3,476 GWh from hydroelectric power plants.

According to the CEC, nearly 45 percent of the natural gas burned in California was used for electricity generation, with the remainder consumed in the residential (21 percent), industrial (25 percent), and commercial (9 percent) sectors. In 2012, total natural gas demand in California for industrial, residential, commercial, and electric power generation was 2,313 billion cubic feet.[6]

According to the CEC, gasoline has remained the dominant fuel within the transportation sector, with diesel fuel and aviation fuels following. In 2015, California consumed approximately 15.1 billion

[5] California Energy Commission (CEC). 2020. Total System Electric Generation. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation. Accessed April 19, 2022.
[6] California Energy Commission (CEC). 2019. Supply and Demand of Natural Gas in California. Website: https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california. Accessed April 19, 2022.

gallons of gasoline and approximately 4.2 billion gallons of diesel fuel.[7,8] An increasing amount of electricity is being used for transportation energy, which is chiefly attributed to the acceleration of light-duty plug-in electric vehicles.

3.5.3 - Regulatory Framework

Federal

Energy Independence and Security Act

The Energy Policy Act of 2005 created the Renewable Fuel Standard program. The Energy Independence and Security Act of 2007 expanded this program by:

- Expanding the Renewable Fuel Standard program to include diesel in addition to gasoline;
- Increasing the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;
- Establishing new categories of renewable fuel, and setting separate volume requirements for each one; and
- Requiring the United States Environmental Protection Agency (EPA) to apply lifecycle greenhouse gas (GHG) emissions performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

This expanded Renewable Fuel Standard program lays the foundation for achieving substantial reductions of GHG emissions from the use of renewable fuels, reducing the use of imported petroleum, and encouraging the development and expansion of the nation's renewable fuels sector.

Signed on December 19, 2007, the Energy Independence and Security Act (EISA) of 2007 aims to:

- Move the United States toward greater energy independence and security.
- Increase the production of clean renewable fuels.
- Protect consumers.
- Increase the efficiency of products, buildings, and vehicles.
- Promote research on and deploy GHG capture and storage options.
- Improve the energy performance of the federal government.
- Increase U.S. energy security, develop renewable fuel production, and improve vehicle fuel economy.

EISA reinforces the energy reduction goals for federal agencies put forth in Executive Order 13423, as well as introduces requirements that are more aggressive. The three key provisions enacted are the Corporate Average Fuel Economy Standards, the Renewable Fuel Standard, and the appliance/lighting efficiency standards.

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[7] California Energy Commission (CEC). 2019. California Gasoline Data, Facts, and Statistics. Website: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-gasoline-data-facts-and-statistics. Accessed April 19, 2022.

[8] California Energy Commission (CEC). 2019. Diesel Fuel Data, Facts, and Statistics. Website: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/diesel-fuel-data-facts-and-statistics. Accessed April 19, 2022.

The EPA is committed to developing, implementing, and revising both regulations and voluntary programs under the following subtitles in EISA, among others:

- Increased Corporate Average Fuel Economy Standards
- Federal Vehicle Fleets
- Renewable Fuel Standard
- Biofuels Infrastructure
- Carbon Capture and Sequestration[9]

The EPA and National Highway Traffic Safety Administration Light-Duty Vehicle GHG Emission Standards and Corporate Average Fuel Economy Standards Final Rule

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light-duty trucks. The law has become more stringent over time. On May 19, 2009, President Barack Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program would apply to passenger cars, light-duty trucks, and medium duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

The EPA and the NHTSA issued final rules on a second phase joint rulemaking, establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012.[10] The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and medium duty passenger vehicles. The final standards project an average industry fleet wide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements.

The EPA and NHTSA issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks and buses on September 15, 2011, which became effective November 14, 2011. For combination tractors, the agencies proposed engine and vehicle standards to begin in the 2014 model year and achieve up to a 20 percent reduction in CO_2 emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies proposed separate gasoline and diesel truck standards, to phase in starting in the 2014

[9] United States Environment Protection Agency (EPA). 2019. Summary of the Energy Independence and Security Act. May 6. Website: https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act. Accessed April 25, 2022.

[10] United States Environmental Protection Agency (EPA). 2012. EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks. August. Website: https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P100EZ7C.TXT. Accessed April 25, 2022.

model year and achieve up to a 10 percent reduction for gasoline vehicles and a 15 percent reduction for diesel vehicles by the 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Last, for vocational vehicles, the engine and vehicle standards proposed to achieve up to a 10 percent reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

The State of California has received a waiver from the EPA to have separate, stricter Corporate Average Fuel Economy Standards. Although global climate change did not become an international concern until the 1980s, efforts to reduce energy consumption began in California in response to the oil crisis in the 1970s, resulting in the incidental reduction of GHG emissions. In order to manage the State's energy needs and promote energy efficiency, Assembly Bill (AB) 1575 created the CEC in 1975.

State

California Assembly Bill 1493: Pavley Regulations and Fuel Efficiency Standards

California AB 1493, enacted on July 22, 2002, required the California Air Resources Board (ARB) to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which the U.S. District Court for the District of Columbia upheld in 2011.[11]

The standards were phased in during the 2009 through 2016 model years. Once these standards were fully phased in, the near-term (2009–2012) standards have resulted in an approximately 22 percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards have resulted in about a 30 percent reduction.

Amendments to the Low Emission Vehicle (LEV) Program, referred to as LEV III or the Advanced Clean Cars program, incorporated the second phase of implementation for the Pavley Bill. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will reduce pollutants from gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicle (EV) and hydrogen fuel cell cars. The regulations will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.[12]

[11] California Air Resources Board (ARB). 2017. Clean Car Standards—Pavley, Assembly Bill 1493. January 11. Website: https://ww2.arb.ca.gov/californias-greenhouse-gas-vehicle-emission-standards-under-assembly-bill-1493-2002-pavley. Accessed April 25, 2022.

[12] California Air Resources Board (ARB). 2011. Status of Scoping Plan Recommended Measures. Website: https://calcarbondash.org/cc/scopingplan/sp_measures_implementation_timeline.pdf. Accessed April 25, 2022.

California Code of Regulations Title 13: Motor Vehicles

California Code of Regulations, Title 13: Division 3, Chapter 10, Article 1, Section 2485: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.[13] This measure seeks to reduce public exposure to diesel particulate matter and other air contaminants by establishing idling restrictions, emission standards, and other requirements for heavy-duty diesel engines and alternative idle reduction technologies to limit the idling of diesel-fueled commercial motor vehicles. Any person that owns, operates, or causes to operate any diesel-fueled commercial motor vehicle must not allow a vehicle to idle for more than five consecutive minutes at any location, or operate a diesel-fueled auxiliary power system for greater than five minutes at any location when within 100 feet of a restricted area.

California Code of Regulations, Title 13: Division 3, Chapter 9, Article 4.8, Section 2449: General Requirements for In-Use Off-Road Diesel-Fueled Fleets. This measure regulates oxides of nitrogen (NO_X), diesel particulate matter (DPM), and other criteria pollutant emissions from in-use, off-road diesel-fueled vehicles. This measure also requires each fleet to meet fleet average requirements or demonstrate that it has met "best available control technology" requirements. Additionally, this measure requires medium and large fleets to have a written idling policy made available to operators of the vehicles, informing them that idling is limited to 5 consecutive minutes or less.

California Senate Bill 1078: Renewable Electricity Standards

On September 12, 2002, Governor Gray Davis signed Senate Bill (SB) 1078, requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. The ARB approved the Renewable Electricity Standard on September 23, 2010, by Resolution 10-23.

California Senate Bill 100: Renewable Portfolio Standard Program

On September 10, 2018, Governor Newsom signed SB 100, requiring California electricity utility providers to supply all in-state end-users with electricity sourced from renewable sources. Specifically, SB 100 accelerates the goals expressed under SB 1078 and requires that the program achieve 50 percent of electricity sourced from renewables by December 31, 2026, 60 percent by December 31, 2030, and 100 percent of electricity sourced from carbon-free sources by December 31, 2045. For clarification, renewable sources, as described herein, includes all renewable sources (e.g., solar, small hydro, wind) but notably omits large-scale hydroelectric and nuclear electricity generation; carbon-free sources include all renewable sources as well as large-scale hydroelectric and nuclear electricity generation.

[13] California Air Resources Board (ARB). (2021. Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling. Website: https://ww2.arb.ca.gov/our-work/programs/atcm-to-limit-vehicle-idling. Accessed April 25, 2022.

California SB 350: Clean Energy and Pollution Reduction Act

In 2015, the State legislature approved, and the Governor signed SB 350, which reaffirmed California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the Renewables Portfolio Standard (RPS), higher energy efficiency requirements for buildings, initial strategies toward a regional electricity grid, and improved infrastructure for EV charging stations. Provisions for a 50 percent reduction in the use of petroleum Statewide were removed from the Bill due to opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce Statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 45 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission, the CEC, and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrified transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.[14]

California Code of Regulations Title 24

Part 6 (Energy Efficiency Standards for Residential and Nonresidential Buildings)

California Code of Regulations Title 24 Part 6 (California's Energy Efficiency Standards for Residential and Nonresidential Buildings) was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2019 Building Energy Efficiency Standards went into effect on January 1, 2020.[15] The 2022 Building Energy Efficiency Standards are scheduled to go into effect on January 1, 2023.[16]

Part 11 (California Green Building Standards Code)

California Code of Regulations Title 24, Part 11, is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect January 1, 2011. The code is updated on a regular basis, with the most recent update consisting of the 2019 California Green Building Standards Code (CALGreen) that became effective January 1, 2020.[17] Local jurisdictions are permitted to adopt more stringent requirements, as State law provides methods for local enhancements. The code recognizes that many jurisdictions have existing construction and demolition ordinances and defers to them as the ruling guidance if they provide a minimum 50 percent diversion requirement. The code also provides exemptions for areas not served by

[14] State of California. 2015. Senate Bill 350: Chapter 547. October 7.
[15] California Energy Commission (CEC). 2019 Building Energy Efficiency Standards. Website: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency. Accessed April 25, 2022.
[16] California Energy Commission (CEC). 2022 Building Energy Efficiency Standards. Website: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency. Accessed May 5, 2022.
[17] International Code Council, Inc. 2019 California Green Building Standards Code. Website: https://codes.iccsafe.org/content/CGBC2019P4. Accessed May 5, 2022.

construction and demolition recycling infrastructure. The California Building Standards Code (CBC) provides the minimum standard that buildings must meet to be certified for occupancy, which is enforced by the local building or planning department with jurisdiction over the building.

California Public Utilities Code

The California Public Utilities Commission (CPUC) regulates privately owned telecommunication, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. It is the responsibility of the CPUC to (1) assure California utility customers receive safe, reliable utility service at reasonable rates; (2) protect utility customers from fraud; and (3) promote a healthy California economy. The Public Utilities Code, adopted by the legislature, defines the jurisdiction of the CPUC.

California Assembly Bill 2076, Shelley (2000)

At the time of writing of this bill, existing law required the State Energy Resources and Conservation and Development Commission to develop contingency plans to deal with possible shortages of electrical energy or fuel supplies in order to protect public health, safety, and welfare. In order to further strengthen the State's energy reliability, this bill required the commission to examine the feasibility of operating a strategic fuel reserve and to examine and recommend an appropriate level of reserves. Additionally, if the commission finds it would be feasible to operate such a reserve, the bill would require the commission to report this finding to the Legislature and request specific statutory authority and funding for establishment of a reserve. Further, the bill required the commission to develop and adopt recommendations on a California Strategy to Reduce Petroleum Dependence.[18]

California Assembly Bill 1007, Pavley (2005)

Prior to the passing of this bill, existing law imposed various limitations on emissions of air contaminants for the control of air pollution from vehicular and nonvehicular sources and designated the State Air Resources Board as the state agency with the primary responsibility for the control of vehicular air pollution. This bill required, not later than January 1, 2007, that the State board, in consultation with specified State agencies, develop and adopt a State plan to increase the use of alternative fuels, as defined.[19]

Local

South San Francisco General Plan Update

The General Plan Update includes the following relevant policies and actions that assist in reducing or avoiding potential impacts related to energy:

[18] California Legislative Information. 2022. Website: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=199920000AB2076. Accessed June 7, 2022.

[19] California Legislative Information. 2022. Website: http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_1001-1050/ab_1007_bill_20050705_amended_sen.html. Accessed June 7, 2022.

Land Use and Community Design Element

Policy LU-1.1 Support mixed use activity centers. Support a network of vibrant mixed use activity centers located throughout the City. Mixed use centers should include business and services, housing, healthy food, parks, and other gathering places.

Action LU-1.1.2 Implement mixed use rezoning. Identify key activity areas that currently feature single-use commercial or residential zoning designations, and re-zone to allow for mixed use development that could provide more convenient access to local commercial.

Policy LU-1.2 Connectivity in complete neighborhoods. Improve walk, bike, and accessibility in complete neighborhoods.

Policy LU-2.1 Prioritize development near transit centers. Collaborate with developers and property owners to locate new housing, mixed use, and employment uses near transit centers to minimize reliance on personal automobiles.

Policy LU-8.4 Require street trees. Require new development to add street trees along streets and public spaces that provide shade, attractive landscaping, and contribute positively toward public health outcomes and climate mitigation and adaptation.

Sub-Areas Element

Policy SA-28.5 Require sustainable and environmentally sensitive design. Incorporate sustainable and environmentally sensitive design and equipment, energy conservation features, water conservation measures and drought-tolerant or equivalent landscaping, and sustainable stormwater management features.

A Prosperous Economy for All Element

Policy PE-2.1 Reinvest in industrial property. Within areas targeted for retention of industrial uses, support industrial property owners seeking to reinvest in and modernize their properties and come into compliance with environmental regulations, current building codes, and use/production of green energy.

Abundant and Accessible Parks and Recreation

Policy PR-11.2 Reduce long-term operations and maintenance costs. Identify ways to reduce the City's long-term operations and maintenance costs, such as adapting more energy efficient technologies for park and recreation facilities, using low water landscape palettes and recycled water for irrigation, or exploring the use of artificial turf, alternative materials and other types of ground cover that do not require heavy maintenance or frequent mowing.

Equitable Community Services Element

Policy ECS-4.3 Identify reductions to long-term operations and maintenance costs. Identify ways to reduce the City's long-term operations and maintenance costs, such as adapting more energy efficient technologies for facilities, using low water

landscape palettes, and using recycled water for irrigation. Reinvest these future savings into additional equitable community services.

Community Health and Environmental Justice

Policy CHEJ-3.1 Support regional efforts to improve air quality and protect human health.

Action CHEJ-3.1.1 Monitor air quality in Lindenville, East of 101 and Downtown. Work with the Bay Area Air Quality Management District to establish and identify funding for air quality monitoring and reduction strategies. This action may include purchasing particulate matter (PM2.5) monitors to track local air quality data in Lindenville, East of 101, and Downtown.

Action CHEJ-3.2.2 Adopt an ordinance establishing vehicle idling restrictions. Establish a local ordinance that exceeds the State vehicle idling restrictions where appropriate, including restrictions for bus layovers, delivery vehicles, trucks at warehouses and distribution facilities and taxis, particularly when these activities take place near sensitive land uses (schools, healthcare facilities, affordable housing, and elder and childcare centers). Manage truck idling in new residential neighborhoods in Lindenville and East of 101.

Action CHEJ-3.3.1 Explore incentives for pollution reduction. Explore opportunities for production, distribution, and warehousing uses in Lindenville and East of 101 to reduce pollution, such as greener trucks, energy efficient buildings, and other strategies.

Community Resilience Element

Policy CR-6.1 Support resilient building design. Support resilient building design by helping residents weatherize homes to keep them cooler and more energy efficient and to improve indoor air quality.

Action CR-6.1.1 Review and update funding programs for resilient building design. Review and update existing funding programs, such as the Property-Assessed Clean Energy program to promote climate-resilient design and retrofits.

Climate Protection Element

Policy CP-1.4 Explore innovative pilot programs. Explore the potential for innovative greenhouse gas reduction pilot programs, including collaborations and partnerships, in each emissions sector (e.g., buildings and energy, transportation, solid waste, water, and carbon sequestration).

Policy CP-2.1 Maintain Peninsula Clean Energy membership. Maintain City membership in Peninsula Clean Energy and continue to work to maintain a high level of private property owner participation in Peninsula Clean Energy.

Policy CP-2.2 Reduce emissions associated with natural gas infrastructure. Partner with the Pacific Gas and Electric Company to develop options for reducing greenhouse gas emissions associated with the existing natural gas grid.

Policy CP-2.4 Install energy resilience infrastructure. Provide energy resilience via backup energy systems, microgrids, and other measures that serve the community during emergency events, particularly supporting disadvantaged communities, including considering creating a financial incentive program for existing and new solar/battery backup system installations.

Policy CP-3.1 Building code maintenance for new and major renovations (energy efficiency). Regularly update South San Francisco's building codes to improve the energy performance of new construction and major remodels and to phase in requirements in predicable ways.

Action CP-3.1.1 Incentivize energy efficient new construction. Provide incentives to encourage new construction to exceed California's Building Energy Efficiency Standards outlined in Title 24, Part 6.

Policy CP-4.1 Establish efficiency upgrade programs. Establish an energy and water efficiency upgrade program for existing buildings, focusing resources on the most disadvantaged communities.

Action CP-4.1.1 Energy audits for homes and businesses. Work with Peninsula Clean Energy, San Mateo County Energy Upgrade to provide free to low-cost energy audits.

Action CP-4.1.2 Adopt Commercial Benchmarking ordinance. Adopt energy and water benchmarking ordinance for commercial buildings over 10,000 square feet to empower owners to control utility costs.

Policy CP-4.2 Prepare a Building Electrification Plan. Develop a date-certain, phased-in Existing Building Electrification Plan to retrofit existing homes and businesses to all electric.

Policy CP-4.4 Community education about energy and water incentives. Educate residents and businesses on available incentive opportunities to reduce energy and water use.

Policy CP-5.1 Require minimum of LEED™ silver rating or equivalent for new buildings. Require all new municipal buildings and facilities to meet a minimum LEED™ silver rating as certified by the US Green Building Council or equivalent green building rating system. Require feasibility studies for zero net energy use, on-site renewable energy generation, and on-site batteries.

Policy CP-5.4 Require 75 percent waste diversion for municipal construction and demolition projects. Require municipal construction projects to achieve 75 percent waste diversion from the landfill.

Policy CP-5.5 Energy resilience of municipal buildings. Require municipal building and facility new construction and major renovation projects to evaluate the feasibility of incorporating on-site batteries that store electricity from on-site renewable energy generation to supply the building and community with electricity in the event of a disaster.

Policy CP-8.1 Evaluate system efficiency. Continuously evaluate and, as appropriate, replace systems at the wastewater treatment plant to reduce energy use.

City of South San Francisco Climate Action Plan

The Climate Action Plan includes the following actions that assist in reducing or avoiding impacts related to energy:

Action CE 1.1 Adopt solar reach code for nonresidential buildings. Require the construction of any new nonresidential conditioned space of 5,000 square feet or more, or the conversion of unconditioned space 5,000 square feet or more, to meet a minimum of 50 percent of modeled building electricity needs with on-site renewable energy sources, as is feasible. To calculate 50 percent of building electricity needs for the new conditioned space, the applicant shall calculate building electricity use as part of the Title 24 compliance process. Total electricity use shall include total use for the new conditioned space excluding process energy.

Action CE 1.3 Streamline PV system permitting and approval. Establish a streamlined PV system permitting and approval process to encourage the addition of solar PV systems.

Action CE 1.6 Explore community scale solar and other renewable energy implementation. Explore the opportunities to install community scale solar PV or other renewable energy systems including biogas to support local energy resiliency and provide renewable energy to disadvantaged communities.

Action BNC 1.1 Improve the energy efficiency of new construction. Provide a combination of financial and development process incentives (e.g., Expedited permitting, FAR increases, etc.) to encourage new development to exceed Title 24 energy efficiency standard.

Action BNC 2.1 Adopt an all-electric reach code for nonresidential new construction. Implement residential all-electric reach code and adopt all-electric reach code for nonresidential new construction. Exempt occupancies must install electric building systems (e.g., space and water heating equipment) where feasible. Until the adoption of the nonresidential all-electric reach code, require any new nonresidential conditioned space of 5,000 square feet or more, or the conversion of unconditioned space 5,000 square feet or more to comply with CALGreen Tier 2 energy efficiency requirements to exceed mandatory energy efficiency requirements by 20 percent or more. For additions to existing development of

5,000 square feet or more, CALGreen Tier 2 shall be calculated as part of the Title 24 compliance process. Existing building space already permitted shall not be subject to CALGreen Tier 2 requirements.

Action BE 1.2 Require major renovations to meet CALGreen standards. Update zoning and building codes to require alternations or additions at least 50 percent the size of the original building to comply with minimum CALGreen requirements.

Action TL 1.1 Electric Vehicle Charing Reach Code. Implement EV Reach code.

Action CL 1.1 Minimum LEED™ certification or equivalent for new buildings. Require all new municipal buildings and facilities to meet a minimum LEED™ silver standards as outlined by the US Green Building Council or equivalent green building rating system. Require feasibility studies for zero net energy use, on-site renewable energy generation, and on-site batteries.

Action CL 1.6 Zero-emission fleet vehicles. Transition fleet vehicles from gasoline and diesel to ZEV (CNG, fuel cell, electric) as feasible ZEV alternatives become available and no later than 2040. Transition City owned and operated small gas engines (e.g., push mowers, trimmers, blowers, etc.) to all-electric by 2024 in line with State mandate.

City of South San Francisco Municipal Code

Chapter 15.22 California Green Building Code

Section 15.22.010 (California Green Building Standards Code) adopts the California Green Building Standards Code, 2019 Edition, published by the California Building Standards Commission by reference.

Chapter 15.26 California Energy Code

Section 15.26.010 (California Energy Code) adopts the California Energy Code 2019 Edition, published by the International Code Council by reference.

Chapter 15.60 Recycling and Diversion of Debris from Construction and Demolition

Chapter 15.60 promotes the redirection of recyclable materials generated during construction away from landfills. All project applicants are required to complete and submit a recycling management plan to estimate the volume of debris to be generated during construction and the estimated amount of debris that would be sent to the landfill.

Section 15.62 (Deconstruction and Salvage and Recovery) encourages contractors to make every structure planned for demolition available for deconstruction, salvage, and recovery prior to demolition; and to recover the maximum feasible amount of salvageable designated recyclable and reusable materials prior to demolition, but at least at the rate set forth in Section 4.408 of Chapter 4 of CALGreen, as may be amended from time to time.

Chapter 15.62 Solar Energy System Review Process

Chapter 15.62 of the Municipal Code aims to encourage the use of solar energy systems and comply with the Solar Rights Act by reducing local discretion in permitting for solar energy systems and creating an expedited, streamlined solar permitting process for small residential rooftop solar energy systems. This chapter allows the City to achieve these goals while protecting the public health and safety.

City of South San Francisco Zoning Ordinance

The following chapters of the South San Francisco Zoning Ordinance, including the new or revised chapters of the Zoning Ordinance that are part of the proposed project, assist in reducing or avoiding impacts related to energy.

Chapter 20.300 Lot and Development Standards (revised)

Section 20.300.007 (Landscaping) (revised) includes a number of requirements for new construction or rehabilitated landscapes to aid in energy conservation by providing shade from the sun and shelter from the wind and encourage the conservation of water resources through the use of native and drought-tolerant plans and water-conserving irrigation practices.

Section 20.300.008 (Lighting and Illumination) (revised) establishes regulations that allow outdoor lighting for uses and activities consistent with the need for utility, safety, and nighttime attractiveness while minimizing:

1. Light escaping directly from fixtures or indirectly after reflection from surfaces into the atmosphere which causes increased artificial sky brightness;
2. Glare arising directly from fixtures or from over-illuminated outdoor areas which interferes with effective vision;
3. Energy waste which increases impacts on the environment through energy production byproducts;
4. Light trespass across property lines; and
5. Potential disruption to nocturnal ecosystems including human health.

3.5.4 - Methodology

Impacts related to energy resources resulting from implementation of the proposed project (collectively, the General Plan Update, Zoning Code Amendments, and Climate Action Plan) are discussed below. This analysis is based on construction energy demand that would result from the use of off-road construction equipment and on-road vehicle trips from workers, vendors, and hauling truck trips. In addition, this analysis is based on operational energy demand that would result from projected future growth at buildout of the proposed project. To determine the increase in energy demand as a result of the proposed project, the total net residential, commercial, and industrial land uses that could be developed with implementation of the proposed project is estimated by calculating the net change from 2019 Existing Conditions (which is based on data from Fehr & Peers for Vehicle Miles Traveled (VMT), as well as 2022 Existing Conditions for nonresidential square

footage,) and buildout of the proposed project. The 2019 Existing Conditions represents the environmental baseline from which impacts caused by the proposed project are assessed.

The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to compute energy demand associated with buildout of the proposed project (see Appendix B).

3.5.5 - Thresholds of Significance

According to California Environmental Quality Act (CEQA) Guidelines Appendix G, to determine whether impacts related to energy are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

3.5.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where appropriate.

Energy Use

Impact ENER-1:	**The proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.**

Implementation of the proposed project would utilize energy resources during construction and operational activities. Energy resources that would be potentially impacted include electricity, natural gas, and petroleum-based fuel supplies and distribution systems.

Development under the proposed would result in additional residential and nonresidential development throughout the Planning Area. Because South San Francisco is a fully built city, new development would primarily occur on parcels that contain existing homes or businesses. The City's primary approach to accommodating growth is to locate new housing and jobs in the East of 101, Lindenville, Downtown, and El Camino planning sub-areas (Chapter 2, Project Description, Exhibit 2-5), which are well served by Caltrain, Bay Area Rapid Transit (BART), or SamTrans service and have good access to opportunity (such as jobs, neighborhood amenities, and health care facilities). The total amounts and differing rates of growth expected among South San Francisco's planning sub-areas reflect multiple policy goals, such as creating transit-oriented communities near Caltrain and BART and linking housing growth with job access. Additionally, the proposed project may result in other private and public improvements throughout the City which have the potential for environmental effects related to energy usage (see Chapter 2, Project Description, Sections 2.5.2, 2.5.5, and 2.5.6). Therefore, subsequent development under the proposed project would result in the consumption of energy resources during construction and operation.

Construction

The proposed project does not expressly authorize any specific construction projects. The land use patterns in the General Plan Update would not be substantially different from existing land use patterns, except as shown on Exhibit 2-5, to accommodate additional growth in the East of 101, Lindenville, Downtown, and El Camino planning sub-areas. Moreover, the incremental potential growth in residential and nonresidential uses would be infill development and would occur within the already developed areas throughout the City. By encouraging residential, commercial, and industrial development within already developed urban areas, the concentration of population, employment, and services allows for more efficient use of energy during construction.

Construction activities associated with individual development projects under the proposed project would consume energy in the form of petroleum fuel for heavy equipment, as well as from worker trips and material delivery trips to the construction sites. Temporary electrical grid power may also be provided to construction sites. It is too speculative at this time to calculate energy usage associated with construction activities because the details regarding future construction activities are not known, including phasing, construction duration, and construction equipment. It should be noted that subsequent environmental review of future development projects would be required to assess potential construction-related energy consumption impacts. Further, as described in Section 3.2, Air Quality, and Section 3.7, GHG Emissions, future development projects would be required to evaluate, measure, and mitigate air quality and GHG impacts generated from construction activities, which would also assist in reducing energy consumption during construction. For example, the Bay Area Air Quality Management District (BAAQMD) recommended Construction Measures, which would apply to future projects include provisions that limit idling, ensure equipment is properly maintained according to manufacturer's specifications, and certain pieces of construction equipment be equipped with Best Available Control Technology, all of which would assist in reducing energy consumption during construction and prevent the wasteful, inefficient, or unnecessary consumption of energy resources.

The General Plan Update policies and actions related to air quality and GHG emissions, would also assist in reducing energy consumption during construction. For example, Policy CHEJ-3.1 requires the City to support regional efforts to improve air quality and protect human health. Action CHEJ-3.1.1 requires the City to work with the BAAQMD to establish and identify funding for air quality monitoring and reduction strategies. This action may include purchasing particulate matter ($PM_{2.5}$) monitors to track local air quality data in Lindenville, East of 101, and Downtown. Action CHEJ-3.2.2 requires the City to establish a local ordinance that exceeds the State vehicle idling restrictions where appropriate, including restrictions for bus layovers, delivery vehicles, trucks at warehouses and distribution facilities and taxis, particularly when these activities take place near sensitive land uses (schools, healthcare facilities, affordable housing, and elder and childcare centers). Action CHEJ-3.2.2 also requires the City to manage truck idling in new residential neighborhoods in Lindenville and East of 101. Lastly, Policy CP-5.4 requires 75 percent waste diversion for municipal construction and demolition projects.

The South San Francisco Municipal Code contains rules and regulations to reduce energy usage during construction. Chapter 15.60 promotes the redirection of recyclable materials generated

during construction away from landfills. All project applicants are required to complete and submit a recycling management plan to estimate the volume of debris to be generated during construction and the estimated amount of debris that would be sent to the landfill. Section 15.62 (Deconstruction and Salvage and Recovery) requires the City to encourage contractors to make every structure planned for demolition available for deconstruction, salvage, and recovery prior to demolition; and to recover the maximum feasible amount of salvageable designated recyclable and reusable materials prior to demolition, but at least at the rate set forth in Section 4.408 of Chapter 4 of the CALGreen, as may be amended from time to time.

There are no policies identified in the Zoning Code Amendments and no Actions identified in the Climate Action Plan that specifically address energy consumption during construction.

Future development under the proposed project would be required to comply with requirements of the South San Francisco Municipal Code and the General Plan Update policies and actions that directly and indirectly reduce energy consumption during construction. Future development would also be required to comply with California Code of Regulations Title 13, Sections 2449(d)(3) and 2485, that limit idling from both on-road and off-road diesel-powered equipment and are enforced by the ARB. As such, activities associated with implementation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy. Therefore, implementation of the proposed project would have a less than significant impact under this criterion.

Operation

Implementation of the proposed project may result in development of up to 17,153 net new residential units (based on 2019 baseline data from Fehr & Peers), and up to 14,100,523 square feet of net new nonresidential space[20] (Chapter 2, Project Description, Table 2-7). Operation of the potential new development in the City would consume natural gas and electricity for building heating and power, lighting, and water conveyance, among other operational requirements. Indirect energy use would include the pumping, treatment, and conveyance of water for buildings, landscaping, and many other end uses. The electrical consumption and natural gas usage associated with the potential development have been calculated in CalEEMod, which found that the potential development would result in a net increase in consumption of 237,352,420 kWh of electricity per year and 392,651,730 kilo-British Thermal Units (kBTUs) of natural gas per year.

The electricity and natural gas consumption rates are based on CalEEMod default parameters which accounts for the 2019 California Code of Regulations Title 24 Part 6 standards. These standards require all homes built in California to have zero net energy use, which is achieved through energy efficiency measures as well as required rooftop solar photovoltaic systems. The 2019 California Code of Regulation Title 24 Part 6 standards also apply to nonresidential buildings and require a variety of energy efficiency measures to be implemented during construction of the structures that will reduce energy usage as well as air emissions. It is anticipated that the future development within the City will be designed and built to minimize electricity and natural gas usage.

[20] Nonresidential space from the Mixed-Use area is conservatively estimated to be 50 percent residential and 50 percent nonresidential space.

The increase in VMT from implementation of the proposed project has been analyzed in Section 3.14, Transportation, which found that although the total VMT would increase from the existing (year 2019) 3,387,200 VMT to 6,585,400 VMT with buildout of the proposed project, the service population would also increase from the existing 123,500 service population to a service population of 245,700 with buildout of the proposed project. Because of the balanced growth of both residential and employment opportunities in the General Plan Update, as well as the extensive public transit options available in the City, the daily VMT per service population (employees + residents) is anticipated to be reduced from 27.42 VMT per service population for existing conditions to 26.80 VMT per service population under proposed project buildout conditions. The reduction in VMT per service population would result in improvements to energy efficiency for transportation-related energy usage.

Because of the recent authorization of the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, which removed the waiver allowing California to set its own vehicle emissions standard, the State is now reliant on the EPA to set vehicle efficiency standards. As such, the most recent national miles per gallon rate of 22.9 miles per gallon for light-duty vehicles has been utilized from Bureau of Transportation Statistics,[21] resulting in the estimated consumption of an additional 128,851 gallons of petroleum fuel per year[22] with implementation of the proposed project. In September 2020, Governor Gavin Newsom issued Executive Order N-79-20, which requires sales of all new passenger vehicles to be zero-emission by 2035 and additional measures to eliminate harmful emissions from the transportation sector, indicating that further reductions in vehicle emissions would be forthcoming through buildout pursuant to the General Plan Update.

The General Plan Update contains several policies and actions that assist in reducing energy consumption and petroleum fuel use. Policy CP-2.1 requires the City to maintain membership in Peninsula Clean Energy and continue to work to maintain a high level of private property owner participation in Peninsula Clean Energy. Policy CP-2.2 requires the City to partner with PG&E to develop options for reducing greenhouse gas emissions associated with the existing natural gas grid. Action CP-3.1.1 requires the City to provide incentives to encourage new construction to exceed California's Building Energy Efficiency Standards outlined in Title 24, Part 6. Policy LU-1.2 requires the City to improve walk, bike, and accessibility in complete neighborhoods. Policy LU-2.1 requires the City to collaborate with developers and property owners to locate new housing, mixed use, and employment uses near transit centers to minimize reliance on personal automobiles. Lastly, Action CHEJ-3.3.1 requires the City to explore opportunities for production, distribution, and warehousing uses in Lindenville and East of 101 to reduce pollution, such as greener trucks, energy efficient buildings, and other strategies.

The South San Francisco Municipal Code contains rules and regulations related to energy resources. Section 15.22.010 (California Green Building Code) adopts the CALGreen, 2019 Edition, published by the California Building Standards Commission by reference. Section 15.26.010 (California Energy Code) adopts the California Energy Code 2019 Edition, published by the International Code Council

[21] Bureau of Transportation Statistics. 2020. Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles. Website: https://www.bts.gov/content/average-fuel-efficiency-us-light-duty-vehicles. Accessed April 27, 2022.

[22] Calculated as 2,950,692 net VMT from light-duty vehicles based on VMT data provided by Fehr & Peers divided by 22.9 miles per gallon.

by reference. Chapter 15.62 of the Municipal Code aims to encourage the use of solar energy systems and comply with the Solar Rights Act by reducing local discretion in permitting for solar energy systems and creating an expedited, streamlined solar permitting process for small residential rooftop solar energy systems.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, include Section 20.300.008 (Lighting and Illumination) (revised) that establishes regulations that allow outdoor lighting for uses and activities consistent with the need for utility, safety, and nighttime attractiveness while minimizing energy waste which increases impacts on the environment through energy production byproducts. Section 20.300.007 (Landscaping) (revised) includes a number of requirements for new construction or rehabilitated landscapes to aid in energy conservation by providing shade from the sun and shelter from the wind and encourage the conservation of water resources through the use of native and drought-tolerant plans and water-conserving irrigation practices.

The Climate Action Plan includes a number of actions to minimize energy consumption. Implementation of Action CE 1.3 would establish a streamlined PV system permitting and approval process to encourage the addition of solar PV systems. Implementation of Action CE 1.6 includes the exploration of opportunities to install community scale solar PV or other renewable energy systems including biogas to support local energy resiliency and provide renewable energy to disadvantaged communities. Implementation of Action BE 1.2 would update zoning and building codes to require alternations or additions at least 50 percent the size of the original building to comply with minimum CALGreen requirements.

Moreover, all new development in the City would be required to meet State energy efficiency regulations including Title 24 Part 6 building energy efficiency standards that require new residential uses to meet a net zero energy use standard, which is met through installation of rooftop solar PV systems, enhanced insulation, and energy efficient appliances. Additionally, the City of South San Francisco Municipal Code Section 15.26.020 requires new residential development to only include all-electric design features and prohibits the use of natural gas utilities.[23] The Title 24 Part 6 requirements also require nonresidential buildings to be designed for increased energy efficiency standards. Other State energy efficiency regulations include SB 100 that requires 100 percent of retail sales of electricity to be generated from zero-carbon emission sources by 2045 and Executive Order N-79-20 that requires 100 percent of new passenger vehicles sold in California to be zero-emissions by 2035.

Compliance with the General Plan Update and Climate Action Plan policies and actions, adherence to the development standards in the South San Francisco Municipal Code and Zoning Ordinance, and compliance with State regulations would ensure that implementation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy. These policies and actions would minimize demands for energy resources and ensure their efficient use. Furthermore, the proposed project minimizes petroleum fuel use for transportation by locating new housing and jobs

[23] City of South San Francisco. 2021. Ordinance Summary. Website: https://www.ssf.net/home/showpublisheddocument/23685/637582409224270000. Accessed June 6, 2022.

in the East of 101, Lindenville, Downtown, and El Camino planning sub-areas, which are well served by Caltrain, BART, or SamTrans service and have good access to opportunity (such as jobs, neighborhood amenities, and health care facilities). Finally, the implementation of Mitigation Measure (MM) TRANS-1 in Section 3.14 Transportation, which requires the City to implement its Transportation Demand Management (TDM) Ordinance as part of the Zoning Code Amendments and parking requirements, would reduce VMT.

Therefore, new development from implementation of the proposed project would be designed and built to minimize energy consumption and would ensure that building energy consumption would not be wasteful, inefficient, or unnecessary. In addition, implementation of the proposed project would minimize petroleum fuel use for transportation. Thus, transportation fuel consumption would not be wasteful, inefficient, or unnecessary. Impacts would be less than significant.

Level of Significance

Less than significant impact.

Energy Efficiency and Renewable Energy Standards Consistency

Impact ENER-2: The proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Development under the proposed would result in additional residential and nonresidential development throughout the Planning Area. Because South San Francisco is a fully built City, new development would primarily occur on parcels that contain existing homes or businesses. Additionally, the proposed project may result in other private and public improvements throughout the City that have the potential for environmental effects related to energy usage (see Chapter 2, Project Description, Sections 2.5.2, 2.5.5, and 2.5.6).

The City's updated draft Climate Action Plan (CAP), which addresses potential impacts related to climate change through the implementation of several energy efficiency measures that are listed in Section 3.5.3, Regulatory Framework. Future development (including redevelopment of existing developed sites) under the proposed project would be required to implement all applicable energy efficiency measures listed in the CAP. In addition, all future development would be required to adhere to the South San Francisco Municipal Code and Zoning Ordinance, which contains rules and regulations regarding energy efficiency. Section 15.26.010 adopts the California Energy Code 2019 Edition, published by the International Code Council by reference. Section 15.26.020 amends the California Energy Code to require new residential development be designed for all-electric utilities and prohibits natural gas usage. Section 15.22.010 adopts the California Green Building Standards Code, 2019 Edition, published by the California Building Standards Commission by reference. Chapter 15.60 promotes the redirection of recyclable materials generated during construction away from landfills. Section 20.300.008 (revised) establishes regulations that allow outdoor lighting while minimizing energy waste which increases impacts on the environment through energy production byproducts. Section 20.300.007 (revised) includes a number of requirements for new construction or rehabilitated landscapes to aid in energy conservation by providing shade from the sun and shelter

from the wind and encourage the conservation of water resources through the use of native and drought-tolerant plans and water-conserving irrigation practices.

In addition, the policies and programs in the General Plan Update would not conflict with applicable State or regional plans for renewable energy or energy efficiency that include Plan Bay Area 2050, BAAQMD 2017 Clean Air Plan, Executive Order N-79-20 which requires 100 percent of new passenger vehicles sold in California to be zero-emissions by 2035, and SB 100 that requires 100 percent of retail sales of electricity to be generated from zero-carbon emission sources by 2045. On the contrary, the policies and actions in the General Plan Update support State and regional plans for renewable energy and energy efficiency, such as Policy CP-5.1 which requires all new municipal buildings and facilities to meet a minimum of Leadership in Energy and Environmental Design (LEED™) silver rating or equivalent green building rating system. Policy CP-5.5 requires new municipal buildings and facilities and major renovation projects to evaluate the feasibility of incorporating on-site batteries that store electricity from on-site renewable energy generation to supply the building and community with electricity in the event of a disaster. Policy CP-8.1 requires the City to continuously evaluate and, as appropriate, replace systems at the wastewater treatment plant to reduce energy use. (See Section 3.7, Greenhouse Gas Emissions, for an additional discussion of the proposed project's consistency with Plan Bay Area 2050 and the BAAQMD 2017 Clean Air Plan.)

Compliance with the CAP Actions, General Plan Update policies and actions, and adherence to the development standards in the South San Francisco Municipal Code and Zoning Ordinance, would ensure that potential new development associated with implementation of the proposed project would not conflict with or obstruct State or local plans for renewable energy or energy efficiency. Therefore, implementation of the proposed project would have a less than significant impact under this criterion.

Level of Significance

Less than significant impact.

3.5.7 - Cumulative Impacts

The geographic scope of the cumulative impact analysis for energy resources is the South San Francisco Planning Area as well as the surrounding cities of Brisbane, Colma, Daly City, Pacifica, San Bruno, and Millbrae. This analysis evaluates whether the impacts of the proposed project, together with the impacts of cumulative development, would result in a cumulatively significant impact with respect to energy resources. This analysis then considers whether the incremental contribution of the impacts associated with the implementation of the proposed project would be significant. Both conditions must apply for a project's cumulative effects to rise to the level of significance.

Cumulative projects would be required to comply with local ordinances and county and city General Plan policies that address energy conservation and energy efficiency, such as complying with the latest California Energy Code, Title 24 Building Energy Efficiency Standards, and CALGreen. Furthermore, PG&E, which supplies electricity to the cumulative project area, would be required by SB 100 to incrementally increase the proportion of renewable electricity generation supplying its in-

state retail sales until it reaches 100 percent carbon-free electricity generation by 2045. Cumulative projects would be required to comply with California Code of Regulations Title 13, Sections 2449(d)(3) and 2485, that limit idling from both on-road and off-road diesel-powered equipment and are enforced by the ARB. Additionally, various federal and State regulations, including the Low Carbon Fuel Standard (LCFS), Pavley Clean Car Standards, and LEV Program, would serve to reduce the transportation fuel demand of cumulative projects. For these reasons, cumulative impacts with respect to energy resources would be less than significant.

Moreover, the proposed project's incremental contribution to less than significant cumulative impacts would not be significant. As discussed above, development resulting from implementation of the proposed project would be subject to General Plan Update and CAP policies and actions and the South San Francisco Municipal Code and Zoning Ordinance to reduce energy consumption. As previously discussed, future development under the proposed project would be required to conform to State, regional, and local policies that would reduce impacts related to energy resources to less than significant levels. When applicable, any additional new development within the Planning Area would be subject, on a project-by-project basis, to independent CEQA review as well as policies and actions in the General Plan Update and CAP, the South San Francisco Municipal Code and Zoning Ordinance, and other applicable City requirements that reduce impacts related to energy resources. Therefore, development consistent with the proposed project would not have a cumulatively considerable contribution to a cumulative energy resources impact.

Level of Cumulative Significance

Less than significant impact.

3.6 - Geology, Soils, and Seismicity

3.6.1 - Introduction

This section of the Draft Program Environmental Impact Report (Draft Program EIR) addresses potential physical environmental effects related to seismic hazards, underlying soil characteristics, slope stability, erosion, and paleontological resources within the South San Francisco General Plan Update Planning Area (Planning Area) resulting from implementation of the General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project). Future discretionary projects facilitated by the proposed project would be evaluated for project-specific impacts related to geology, soils, and seismicity at the time they are proposed.

The following is a summary of comments related to Geology, Soils, and Seismicity that were received in response to the Notice of Preparation (NOP). The comment letters are included in Appendix A.

- Recommends that the Draft Program EIR address liquefaction, landslide, faulting, ground shaking, geologic history and rock types in the Planning Area, as well as soil types and soil characteristics pertinent to development.
- States that Holocene-active strands of the San Andreas Fault Zone traverse the Planning Area.
- States that new Zones of Required Investigation for liquefaction and earthquake-induced landslides be released.

The descriptions and analysis in this section are based, in part, on statements, data, and figures provided by the following reference materials:

- South San Francisco General Plan Update.
- South San Francisco Municipal Code.
- United States Department of Agricultural (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey.
- United States Geological Survey (USGS) Interactive Fault Map.
- California Geological Survey (CGS) Earthquake Zones of Required Investigation, San Francisco South Quadrangle.
- California Department of Conservation CGS Seismic Hazard Zone Report for the geologic map.
- Paleontological Records Search for the South San Francisco General Plan Update by Dr. Kenneth L. Finger, Consulting Paleontologist (Appendix E).

3.6.2 - Environmental Setting

This section includes a discussion of existing geologic, soil, and seismic conditions in the Planning Area. This section also describes seismic and other geologic hazards and paleontological resources as they relate to the Planning Area.

Geology

The City of South San Francisco (City) is located within the Coast Range Geomorphic Province of California, at the base of the San Bruno Mountains.[1] This geomorphic unit is characterized by northwest-trending valleys and mountain ranges, which are generally parallel to major geological structures such as the San Andreas Fault system of active faults.[2] The San Andreas Fault Zone is a dominant geologic feature within the State of California. This fault zone is the boundary between the Pacific and North American Tectonic Plates, which has played a crucial role in California's geologic history.

Soils

Based on a review of the USDA Soil Conservation Survey, there are five different soil types throughout the Planning Area.[3] The following describes the more predominant soil types in the Planning Area. Site-specific geotechnical surveys conducted during the environmental review process for a subsequent project would determine accurate soil types that underlay each specific project site.

The USDA Soil Conservation Survey has identified Urban Land and Urban Land-Orthents as the predominant map units within the Planning Area. Urban Land consists of areas covered by roads, driveways, parking lots, houses, and other structures. The soils under these structures have been graded and mixed or have been covered with fill material. Urban Land-Orthents is a combination of Urban Land and smoothed, well-draining soils with sandy loam. Urban Land-Orthents map units are used for urban and homesite development with slopes that range from 0 to 5 percent. Urban Land-Orthents is east of I-280, extending from San Bruno to Redwood City and Urban Land makes up the majority of San Mateo County.[4]

The Planning Area also contains Barnabe, Candlestick, Buriburi, Novato Clay, and Orthents soils, which are found on San Bruno Mountain, Sweeney Ridge, and Skyline Boulevard south of Highway 92. Barnabe soils are very shallow, very gravelly, and contain highly fractured sandstone. Candlestick soils are moderately deep, and its surface layer is sandy loam while its lower parts are brown loam. Buriburi soils are similar to Barnabe and Candlestick soils; this soil is made up of gravelly loam over fractured sandstone. Novato Clay is very deep and very poor-draining soil; it is generally found in saltwater marshes along the edges of San Francisco Bay. Orthents are deep, dark alluvial soils in areas adjacent to San Bruno Mountain.

Artificial fill areas in the Planning Area consist of engineered and non-engineered fill.[5] Examples of these fill areas are along some of the freeways; the San Francisco Bay margins where it overlies young estuarine mud deposits (Holocene Bay Mud); and infilling of tributaries to Colma Creek. Non-engineered fills are commonly loose and uncompacted, and the material varies in size and type.

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1 California Geologic Survey (CGS). 2002. California's Geomorphic Provinces. Website: https://www.conservation.ca.gov/cgs/Documents/Publications/CGS-Notes/CGS-Note-36.pdf. Accessed February 27, 2022.

2 Ibid.

3 United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2022. Soil Map-San Mateo County, Eastern Part, and San Francisco County, California. Website: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed February 27, 2022.

4 United States Department of Agriculture (USDA). Soil Survey of San Mateo County, Eastern Part, and San Francisco County, California. Pages 7-13.

5 California Department of Conservation, California Geological Survey (CGS). 2021. Seismic Hazard Zone Report for the San Francisco South 7.5-Minute Quadrangle. Website: https://www.conservation.ca.gov/cgs/Documents/Publications/SHZR/SHZR_133_San_Francisco_South_a11y.pdf. Accessed February 27, 2022.

Regional Faulting

The South San Francisco Planning Area, like much of the San Francisco Bay Area, is vulnerable to seismic activity due to several active faults in the region.[6] There are approximately 30 known faults in the Bay Area with the potential to generate earthquakes; 11 of which are within 40 miles of the City. The Peninsula segment of the San Andreas Fault (the closest active fault) passes through the westernmost corner of the City[7] in the Westborough sub-area (Exhibit 3.6-1). An "active" fault is one that has experienced displacement within the last 11,000 years and is expected to move again.[8] Other active faults in the vicinity of the Planning Area include the San Gregorio Fault, approximately 5.5 miles west, the Hayward Fault, approximately 15 miles east, and the Calaveras Fault, approximately 25 miles east.

The USGS 2014 Working Group on California Earthquake Probabilities updated the 30-year earthquake forecast for California and concluded that there is a 72 percent probability (or likelihood) of at least one earthquake of magnitude 6.7 or greater striking somewhere in the San Francisco Bay region before 2043.[9] The Hayward Fault has the highest likelihood of an earthquake greater than or equal to a magnitude 6.7 in the Bay Area, estimated at 33 percent, while the likelihood for the Calaveras, San Andreas, and San Gregorio Faults is estimated at approximately 26, 22, and 6 percent, respectively.

Seismic Hazards

Within the City, earthquake damage to structures can be caused by surface rupture, ground shaking, ground failure, land sliding, and inundation from seiche or tsunami. The level of damage in the City resulting from an earthquake will depend upon the magnitude of the event, the epicenter distance from the City, the response of geologic materials, and the strength and construction quality of structures. Seismically induced water inundation is described in Section 3.9, Hydrology and Water Quality.

Ground Shaking

South San Francisco is susceptible to ground shaking. The Modified Mercalli Intensity Scale (MMI) estimates the intensity of shaking from an earthquake at a specific location or over a specific area by considering its effects on people, objects, and buildings. The estimated ground shaking intensities in the City, assuming a magnitude 7.2 earthquake on the Peninsula segment of the San Andreas Fault, are shown in Exhibit 3.6-2. The southwestern corner and most of the City east of El Camino Real is located within Zone VIII (Very Strong) and is estimated to experience moderate structural damage. The remainder of the City, including the portions fronting the San Francisco Bay, are located within Zone IX (Violent) and are estimated to experience heavy structural damage.

The severity of the damage depends on the building type, the age of the building, and the quality of the construction. Masonry and non-ductile concrete buildings can be more severely damaged than

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6 United States Geological Survey (USGS). U.S. Quaternary Faults. Website: https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf. Accessed February 27, 2022.

7 Ibid.

8 California Department of Conservation. 2003. Note 31: Faults and Earthquakes in California. January.

9 United States Geological Survey (USGS). Earthquake Outlook for the San Francisco Bay Region 2014-2043. Website: https://pubs.usgs.gov/fs/2016/3020/fs20163020.pdf. Accessed February 27, 2022.

wood-frame or engineered buildings. Buildings constructed in accordance with older building codes can be more severely damaged than recently constructed buildings using newer codes.

The major threat to people in the City is structural failure of buildings or failure of soil on slopes. Because of the San Francisco Bay Area's network of faults, it is essential to enforce strict earthquake construction and soil engineering standards to select the most stable building sites and compensate for soil instabilities.

Surface Fault Rupture

Surface fault rupture, or a break in the ground's surface and associated displacement caused by fault movement, is directly correlated to earthquake magnitude. Earthquakes having a magnitude of 5.5 or greater are generally required for such events to occur. During the 1906 San Francisco Earthquake, ground rupture occurred along the San Andreas Fault. Surface fault rupture generally occurs along an existing (usually active) fault trace. Areas susceptible to surface fault rupture are delineated by Alquist-Priolo Earthquake Fault Zones mapping performed by the CGS to mitigate hazards of surface fault rupture along earthquake faults, by avoiding placement of habitable structures across traces of active faults.[10]

The CGS has delineated an Alquist-Priolo Earthquake Fault Zone associated with the San Andreas Fault on the San Francisco South Regulatory Map.[11] As depicted on the map, the land-based portion of the Alquist-Priolo Earthquake Fault Zone extends from Mussel Rock Park, Daly City in the north to Portola Highlands Park, San Bruno in the south. Within the Planning Area, the Alquist-Priolo Earthquake Fault Zone is up to 1,200 feet wide, passes through the westernmost corner of the City, and contains Holocene-active strands of the San Andreas Fault Zone (Exhibit 3.6-3).[12] As depicted on the San Francisco South Regulatory Map, surface fault rupture occurred within the westernmost corner of the City during the 1906 San Francisco Earthquake.

Ground Failure

Ground failure is a secondary effect of earthquake shaking that can be potentially dangerous and damaging. Ground failure effects include landslides, rock falls, subsidence, liquefaction, and ground lurching in areas not actually ruptured by a fault. These activities involve ground surface displacement due to loss of strength or failure of underlying materials during earthquake shaking. Moisture content and groundwater levels are important in assessment of ground failure potential, as are soil type and slope instability.

Landslides and Slope Instability

Seismic ground shaking can also result in landslides and other slope instability. Slope stability is affected by several interrelated factors, such as steepness, weak unconsolidated soil units, high clay content formations, water saturation, vegetation removal, and seismic activity. Landslides occur

[10] California Department of Conservation. 2019. The Alquist-Priolo Earthquake Fault Zoning Act. Website: https://www.conservation.ca.gov/cgs/alquist-priolo. Accessed February 27, 2022.

[11] California Geological Survey (CGS). 2021. Earthquake Zones of Required Investigation San Francisco South Quadrangle. September 23. Website: https://www.conservation.ca.gov/cgs/Documents/Publications/EZRIM/SAN_FRANCISCO_SOUTH_EZRIM_a11y.pdf. Accessed February 27, 2022.

[12] California Division of Mines and Geology (CDMG). Earthquake Planning Scenario for a Magnitude 8.3 Earthquake on the San Andreas Fault in the San Francisco Bay Area. Special Publication 61, 1982.

when slopes become unstable, and masses of material move downslope. Landslides are usually rapid and can be triggered by earthquakes. Mudslides and slumps are a shallower type of slope failure. They typically affect upper soil horizons rather than bedrock features and are more common.

Exhibit 3.6-4 shows the general susceptibility of the Planning Area to landslides. The majority of the City is located within a low or moderate risk for landslides. Portions of the City are hilly and underlain with weak bedrock with slopes greater than 15 percent and have the greatest susceptibility to landslides. In the Paradise Valley/Terrabay area, slopes required extensive stabilization, drainage improvements, and seismic mitigations when subdivisions were built. The slopes still pose a hazard, with elevated wildfire risk and rockfall risk.

Subsidence/Liquefaction

Subsidence is the sinking of the ground surface caused by compression of soil layers. Seismically induced subsidence occurs in loose to medium density unconsolidated soils above groundwater. Subsidence can be exacerbated by increased loading from structures. This hazard can be mitigated prior to development through removal and re-compaction of loose or poorly consolidated soils.

Liquefaction occurs when loose sand and silt that is saturated with water behaves like a liquid when shaken by an earthquake, removing structural support. As such, liquefaction is more likely to occur in areas with a shallow water table.

Liquefaction susceptibility within the Planning Area is shown in Exhibit 3.6-5. Liquefaction occurs only in saturated soil conditions, and the susceptibility of a soil to liquefaction varies with the depth to groundwater. Areas near the San Francisco Bay have high ground failure potential, including liquefaction and settlement during earthquake shaking. Most of the lowland areas of the City have the potential for liquefaction hazards, with very high liquefaction potential in the East of 101 and Lindenville planning sub-areas, high potential along Colma Creek, and moderate potential in the alluvial fan of Colma Creek and in a narrow strip of land south of Sister Cities Boulevard.

Lateral Spreading

Liquefaction-induced lateral spreading generally occurs on gentle slopes of 0.3 to 5 percent underlain by loose sands and a shallow water table. If liquefaction occurs because of an earthquake, unsaturated topsoil can slide as an intact block over a lower, liquefied layer. Displaced soil proceeds downslope or toward a steep free face, such as a stream bank or road cutting. Geologic conditions conducive to lateral spreading are frequently found along streams and other waterfronts. Within the City of South San Francisco, liquefaction-induced lateral spreading could occur in the low-lying coastal areas and along Colma Creek.[13]

[13] California Department of Conservation, California Geological Survey (CGS). 2021. Seismic Hazard Zone Report for the San Francisco South 7.5-Minute Quadrangle. Website: https://www.conservation.ca.gov/cgs/Documents/Publications/SHZR/SHZR_133_San_Francisco_South_a11y.pdf. Accessed February 27, 2022.

Other Geologic Hazards

Expansive Soils

Expansive soils contain high proportions of clay and alternately absorb and release large amounts of water across wet and dry cycles. When structures are built on expansive soil, foundations may rise during the wet season, resulting in cracked foundations, distorted frameworks, and warped windows and doors. These adverse effects can be eliminated by recognition of expansive soils and application of remedial measures for site development and foundation design.

The following description of linear extensibility (also known as shrink-swell potential or expansive potential) is provided under the Glossary tab on the NRCS Web Soil Survey:

> [Linear extensibility] Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10- bar tension and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, (coefficient of linear extensibility).

Expansive soils in the City are generally located within the Colma Formation, which runs horizontally through the central portion of the City.[14] Along the eastern perimeter of the City near San Francisco Bay is primarily artificial fill—artificial fill over tidal flats, Alluvium, and slope debris and ravine fill—all of which are susceptible to damage from expansive soils.[15]

Settlement

Settlement is the lowering of the land-surface elevation as a result of loading (e.g., placing heavy loads, typically fill or structures), which often occurs with the development of a site. Settlement or differential (i.e., unequal) settlement could occur if buildings or other improvements are built on low-strength foundation materials (including imported non-engineered fill) or if improvements straddle the boundary between different types of subsurface materials (e.g., a boundary between native material and fill). Although settlement generally occurs slowly enough that its effects are not dangerous to inhabitants, it can cause significant building damage over time.

Settlement is most extreme over mud and fine-grained sediments having a high-water content. Fill settlement is not uniform because permeable sand layers within the estuarine sediments (e.g., within Bay Mud) enable migration of water during loading and thus influence the behavior of the overlying fills.[16] Soils developed on non-engineered fills also tend to be weak and compressible and settle over time. Fill settlement is more pronounced and rapid in sandy fill and fill overlying sand

[14] United States Geological Survey (USGS). 1998. Preliminary Geologic Map of the San Francisco South 7.5-minute Quadrangle and Part of the Hunters Point 7.5-minute Quadrangle, San Francisco Bay Area, California.

[15] Ibid.

[16] William Lettis & Associates, Inc. 2008. USGS Final Technical Report – Detailed Mapping of Artificial Fills, San Francisco Bay Area, California. Website: https://earthquake.usgs.gov/cfusion/external_grants/reports/07HQGR0078.pdf. Accessed February 27, 2022.

shoals or sand bodies within Bay Mud.[17] Where fill has variable thickness, differential settlement is especially problematic.

Normal static settlement is intensified and accelerated by strong earthquakes. Rapid settlement of this type can result in vertical or horizontal separation of structures or portions of one structure, cracked foundations, roads, sidewalks, and walls and, in severe situations, building collapse and bending or breaking of underground utility lines.

According to the Soil Survey for San Mateo County, Eastern Part, and San Francisco County, Urban Land consists of areas covered by asphalt, concrete, buildings, and other structures. This is also known as Urban Land-Orthents, smoothed complex and comprises approximately 30 percent of South San Francisco. In the City of South San Francisco, there are 1,855 acres of Urban Land-Orthents.[18] This map unit contains 5 to 50 percent slopes. The Orthents consist mainly of well-drained, steep soils that have been cut and filled for homesite and urban development. Included in this map unit are small areas of soils that are similar to Orthents, smoothed, but are loamy sand or silty loam.[19]

Soil Erosion

Erosion refers to soil removal by water or wind. Factors that influence the potential for erosion include amount of rainfall and wind, length and steepness of slopes, and amount and type of vegetative cover. San Francisco Bay is a relatively shallow estuary. A number of natural processes have altered patterns of deposition and erosion throughout the estuary including wind wave erosion. Between 1956 and 1983, San Francisco Bay has converted more than 80 percent of its tidal marsh to salt ponds, agricultural, and urban areas and experienced a 40 percent decline in intertidal mud flat area due to periods of deposition and erosion.[20]

Paleontological Resources

Paleontological resources refer to fossilized evidence of past life found in the geologic record. Paleontological resource localities are sites where fossilized remains of plants or animals are concentrated. Although there remains a large volume of sedimentary rock deposits in soil and an extraordinary number of organisms that have lived over time, intact fossils are very rare. The relative rarity of paleontological resources, coupled with the scientific insight they can provide, means they are significant and valuable records of past life.

A paleontological records search of the University of California Museum of Paleontology (UCMP) was performed by Dr. Kenneth L. Finger on November 8, 2021 (Appendix E).[21] The information that follows is from that records search, which indicated areas of high and low paleontological sensitivity (Exhibit 3.6-6).

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[17] William Lettis & Associates, Inc. 2008. USGS Final Technical Report – Detailed Mapping of Artificial Fills, San Francisco Bay Area, California. Website: https://earthquake.usgs.gov/cfusion/external_grants/reports/07HQGR0078.pdf. Accessed February 27, 2022.

[18] United States Department of Agriculture (USDA) Natural Resources Conservation Service (NCRS). 2022. Web Soil Survey – San Mateo County, Eastern Part, and San Francisco County, California. Website: https: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed February 27, 2022.

[19] Ibid.

[20] United States Geologic Survey (USGS). 2004. Deposition, Erosion, and Bathymetric Change in South San Francisco Bay: 1858-1983.

[21] Finger, Kenneth L. 2021. Paleontological Records Search: South San Francisco General Plan Update, San Mateo County.

As shown on part of the geologic map by Brabb and Pampeyan (1983), the surface of the Planning Area and its surrounding half-mile search area consists of five Holocene units [younger (inner) alluvial fan deposits (Qyf), younger (outer) alluvial fan deposits (Qyfo) colluvium (Qcl), alluvium (Qal), and artificial fill (Qaf)], the Pleistocene Colma Formation (Qc), the Plio-Pleistocene Merced Formation (Tms), and five lithologic "members" of the Late Jurassic–Early Cretaceous Franciscan Complex: metamorphic rocks (Kjs), greenstone (fg), sandstone (fs), sheared rock (fsr), and serpentine (sp). Alluvium is mostly sand and silt but locally contains clay, gravel, or boulders. Artificial fill is made up of clay, silt, sand, rock fragments, organic matter, and man-made debris. The Colma Formation is made up of sandy clay and silty sand. Metamorphic rocks contain interbedded sandstone and shale, hard where fresh and intact, soft where weathered or sheared. Serpentine is hard to soft, generally greenish gray, and contains small bodies of grabbro and diabse. Holocene deposits are too young to be fossiliferous; hence, the paleontological records search of the UCMP database focused on the older units.

Although the database does not record any fossils of any kind from the Colma Formation, Rodda and Baghal (1993) reported the most abundant collection of Pleistocene vertebrates from San Francisco is from an excavation in this unit at Telegraph Hill, and it includes *Mammuthus* cf. *M. columbi* (Columbian mammoth) and *Bison* cf. *B. latifrons* (bison). The Colma Formation is therefore assigned a high paleontological sensitivity and a low paleontological potential.

For the Merced Formation, the UCMP database records 23 vertebrate localities in San Mateo, San Francisco, Marin, and Sonoma counties, which yielded 172 specimens ranging in assigned age from Pleistocene to Miocene. Stirton and Goeriz (1942) referred to the Merced Formation as late Miocene and Pliocene age; hence, the Miocene assignments of UCMP localities in the Merced went unquestioned for many years. More recently, Ingram and Ingle (1998) used strontium isotope chronostratigraphy to constrain the base of the formation between 2.4 and 4.8 millions of years, which is younger than the 5.333 millions of years base of the Pliocene, while pinning down the upper age of the unit to 0.45 millions of years. Accordingly, the USGS Lexicon of Geological Names defines the age range of the Merced Formation as Pliocene–Pleistocene.

The Appendix of this report is a systematic listing of the taxa recorded from the Merced Formation. The four San Mateo County localities yielded six specimens, including ground sloth, sea otter, mammoth, and whale. There are also 10 plant localities in the Merced Formation: eight in San Mateo County, one in San Francisco County, and one in Sonoma County. Nearest to South San Francisco and about 1.5 miles to the northwest are six localities at Thornton State Beach, west of Daly City. Among the collected plant specimens are cones of spruce or pine. In conclusion, the Merced Formation is assigned a high sensitivity and a moderate potential for significant paleontological resources.

No significant paleontological resources are recorded from the Franciscan Complex. Although radiolarian microfossils have been found in its cherts, and invertebrates in its limestones, the Franciscan lacks any sensitivity or potential for significant paleontological resources.

3.6.3 - Regulatory Framework

Federal

National Earthquake Hazards Reduction Program

The National Earthquake Hazards Reduction Program (NEHRP) was established by the U.S. Congress when it passed the Earthquake Hazards Reduction Act of 1977, Public Law 95–124. In establishing the NEHRP, Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use controls and redevelopment, prediction techniques and early warning systems, coordinated emergency preparedness plans, and public education and involvement programs. The four basic goals remain unchanged:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation.
- Improve techniques for reducing earthquake vulnerabilities of facilities and systems.
- Improve earthquake hazards identification and risk assessment methods, and their use.
- Improve the understanding of earthquakes and their effects.

Several key federal agencies contribute to earthquake mitigation efforts. There are four primary NEHRP agencies:

- National Institute of Standards and Technology of the Department of Commerce
- National Science Foundation
- United States Geological Survey of the Department of the Interior
- Federal Emergency Management Agency (FEMA) of the Department of Homeland Security

Implementation of NEHRP priorities is accomplished primarily through original research, publications, and recommendations to assist and guide State, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program, authorized by Section 402(p) of the federal Clean Water Act, controls water pollution by regulating point sources, such as construction sites and industrial operations that discharge pollutants into waters of the United States. A Storm Water Pollution Prevention Plan (SWPPP) is required to control discharges from a project site, including soil erosion, to protect waterways. A SWPPP describes the measures or practices to control discharges during both the construction and operational phases of a project. A SWPPP identifies project design features and structural and nonstructural Best Management

Practices (BMPs) that would be used to control, prevent, remove, or reduce stormwater pollution from the site, including sediment from erosion.

Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act of 2002 codifies the generally accepted practice of limited vertebrate fossil collection and limited collection of other rare and scientifically significant fossils by qualified researchers. Researchers must obtain a permit from the appropriate State or federal agency and agree to donate any materials recovered to recognized public institutions, where they would remain accessible to the public and other researchers.

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code [PRC] §§ 2621 to 2630) was passed in 1972 to provide a Statewide mechanism for reducing the hazard of surface fault rupture to structures used for human occupancy. The main purpose of the Act is to prevent the siting of buildings used for human occupancy across the traces of active faults. It should be noted that the Act addresses the potential hazard of surface fault rupture and is not directed toward other earthquake hazards, such as seismically induced ground shaking or landslides.

The law requires the State Geologist to identify regulatory zones (known as Earthquake Fault Zones or Alquist-Priolo Zones) around the surface traces of active faults, and to depict these zones on topographic base maps, typically at a scale of 1 inch to 2,000 feet. Earthquake Fault Zones vary in width, although they are often 0.75-mile wide. Once published, the maps are distributed to the affected cities, counties, and State agencies for their use in planning and controlling new or renewed construction. Except for single-family wood-frame and steel-frame dwellings that are not part of a larger development (i.e., four units or more), local agencies are required to regulate development within the mapped zones. In general, construction within 50 feet of an active fault zone is prohibited.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (PRC §§ 2690–2699.6), which was passed in 1990, addresses earthquake hazards other than surface fault rupture. These hazards include strong ground shaking, earthquake-induced landslides, liquefaction, or other ground failures. Much like the Alquist-Priolo Earthquake Fault Zoning Act discussed above, these seismic hazard zones are mapped by the State Geologist to assist local government in the land use planning process. The Act states, “it is necessary to identify and map seismic hazard zones in order for cities and counties to adequately prepare the safety element of their general plans and to encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety.” The Act also states, “cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard.”

California Building Code

The State of California provides minimum standards for building design through the California Building Standards Code (California Code of Regulations [CCR], Title 24). Where no other building

codes apply, Chapter 29 regulates excavation, foundations, and retaining walls. The California Building Standards Code (CBC) applies to building design and construction in the State and is based on the federal Uniform Building Code (UBC) used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The CBC has been modified for California conditions with more detailed and/or more stringent regulations.

The State earthquake protection law (California Health and Safety Code § 19100 *et seq*.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. Specific minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. The CBC identifies seismic factors that must be considered in structural design. Chapter 18 of the CBC regulates the excavation of foundations and retaining walls, and Appendix Chapter A33 regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

The CBC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control (Chapter 18, Appendix J).

California Public Resources Code

Section 5097 of the California Public Resources Code specifies procedures for unexpected discovery of paleontological resources. Section 5097.5 of the Code states that no person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other paleontological feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands.

Local

South San Francisco General Plan Update

The General Plan Update includes the following relevant policies and actions that assist in reducing or avoiding hazards related to geology and soils, and potential impacts to paleontological resources:

Community Resilience Element

Policy CR-1.2 Participate in regional hazard planning initiatives. Participate in collaborative hazard planning and preparedness work.

Action CR-1.2.1 Continue funding regional sea level rise and flood protection agency. Continue to fund and contribute to the San Mateo County Flood and Sea Level Rise Resiliency District.

Policy CR-1.3 Mainstream municipal climate preparedness planning and assessment. Implement climate preparedness planning across City departments, programs, and operations.

Action CR-1.3.1 Participate in the Countywide Hazard Mitigation Plan. Actively participate in the San Mateo County Hazard Mitigation Plan maintenance protocols and Countywide initiatives. Adopt the Hazard Mitigation Plan by reference upon update. Update emergency operations plans and protocols to account for regularly updated hazard information.

Action CR-1.3.3 Require multi-hazard real estate disclosure. Enact an ordinance to require real estate disclosures of all hazards identified in the Hazard Mitigation Plan, including hazards associated with anticipatory sea level rise and flooding, geologic hazards, groundwater inundation, or wildfire for commercial and residential properties, including ownership and rental.

Policy CR-1.4 Develop and maintain resilient infrastructure standards. Periodically adjust infrastructure design standards to address asset-specific vulnerabilities associated with the hazards.

Policy CR-1.5 Require capital projects in high hazard areas to adhere to risk assessment guidance. As part of the capital planning and budgeting process, require all projects located within high hazard areas and sea level rise inundation zones to adhere to risk assessment guidance and identify appropriate resilience strategies.

Policy CR-1.6 Continually strengthen emergency management and operations. Continually strengthen emergency management capacity and coordination with the San Mateo County Emergency Operations Center.

Action CR-1.6.1 Develop a resiliency hub program. Develop a resiliency hub program to help community members with disaster planning assistance and supplies.

Action CR-1.6.2 Upgrade the Emergency Operations Center. Add second floor to the City's Emergency Operations Center (EOC) and a warehouse to store supplies to support the city in the event of a disaster. Ensure the EOC has the necessary capabilities and can continue operations after all future hazards.

Action CR-1.6.3 Establish a resilience education program. Establish a community resilience education program in collaboration with San Mateo County and local community partners. Work with the Community Emergency Response Team and promotors programs to disseminate the information.

Action CR-1.6.4 Identify locations for post-disaster emergency housing. Identify locations for emergency housing, siting locations in areas with lower hazard risk.

Policy CR-1.8 Enhance post-disaster recovery planning. Ensure the City is ready for post-disaster recovery through proactive planning.

Action CR-1.8.1 Prepare a post-disaster recovery plan. Create a post-disaster recovery framework that establishes post-disaster policies and programs designating when, where, and how rebuilding will occur.

Action CR-1.8.2 Adopt post-disaster repair standards for existing buildings. Develop and adopt special repair and upgrade standards for existing buildings, in the case of post-disaster reconstruction and/or conversion to mixed use or more compact residential use.

Policy CR-4.1 Protect buildings, infrastructure, and other assets from seismic hazards. Protect existing and new buildings, infrastructure, and other assets from seismic hazards.

Action CR-4.1.1 Conduct seismic assessments for municipal assets. Regularly complete seismic assessments of critical municipal buildings, facilities, and infrastructure. Develop locally specific seismic hazard maps to improve mapping resolution and support more informed and nuanced decision-making about development and hazard mitigation, particularly where other hazards like sea level rise compound the risk.

Action CR-4.1.2 Continually update the Building Code for seismic and other hazard safety. Regularly update the City's Building Code to incorporate current earthquake standards.

Action CR-4.1.3 Maintain a soft-story building[22] inventory. Maintain and regularly update a database of soft-story/fragile housing.

Action CR-4.1.4 Expand seismic retrofit incentive program expansion. Expand efforts to incentivize retrofits of buildings and other mitigation measures in seismic and geologic hazards zones. Explore developing a specific program to address seismic retrofit needs within South San Francisco's affordable housing stock.

Policy CR-4.2 Maintain emergency response capabilities. Maintain the capability to quickly respond to natural and human caused disasters and minimize damage and injury caused by these events.

Policy CR-4.3 Discourage hillside area development on slopes more than 30 percent. Discourage development on steep hillside areas more than 30 percent grade. Development of hillside sites should follow existing contours to the greatest extent possible. Grading should be kept to a minimum.

Policy CR-4.4 Protect buildings, infrastructure, and other assets from other geologic hazards. Protect existing and new buildings, infrastructure, and other assets from other geologic hazards, including landslides, slope instability, liquefaction, settlement, subsidence, unstable geologic units, unstable soils, and expansive soils.

[22] Soft-story buildings are defined as wood-frame structures, containing five or more residential units, having two or more stories over a "soft" or "weak" story, and permitted for construction prior to January 1, 1978.

Action CR-4.4.1 Require site-specific soils and geologic reports for projects located in high hazard areas. On a parcel-by-parcel basis, require that permit applications for projects located within areas susceptible to geologic hazards, as shown on Figure 43, prepare site-specific soils and geologic reports for review and approval by the City Engineer, and incorporation of the recommended actions during construction.

Environmental and Cultural Stewardship Element

Policy ES-7.1 Develop and implement a comprehensive watershed management strategy. Partner with regional and local agencies to develop a comprehensive watershed management strategy that identifies programs, partnerships, actions, and incentives that the City and partners can take to protect the City's water resources and aquatic areas. Collaborate with regional agencies and neighboring jurisdictions to manage stormwater, reduce impervious surfaces, and improve water quality in the Colma Creek watershed.

Policy ES-7.2 Integrate green infrastructure in City projects. Integrate green infrastructure strategies into city-owned landscapes to improve water quality and reduce the need to irrigate landscapes.

Policy ES-7.3 Require stormwater management practices for new and redevelopment projects. Continue to require new development and redevelopment projects to meet federal, State, regional, and local stormwater requirements, including site design, stormwater treatment, stormwater infiltration, peak flow reduction, and trash capture.

Policy ES-7.4 Encourage pervious surfaces. Encourage pervious surfaces in new developments.

South San Francisco Municipal Code

Chapter 14.04 Stormwater Management and Discharge Control

Section 14.04.132 (Site design measures for non-regulated projects) states that all new development and redevelopment projects are encouraged to include adequate site design measures that include minimizing land disturbance and impervious surfaces.

Section 14.04.180 (Reduction of pollutants in stormwater) requires BMPs for all construction sites in the City for erosion control, run-on and runoff control, sediment control, active treatment systems (as appropriate), and good site management through all phases of construction (including, but not limited to, site grading, building and finishing of lots) until the site is stabilized by landscaping or the installation of permanent erosion control measures.

Chapter 14.14 (Sewer Lateral Construction, Maintenance, and Inspection)

Chapter 14.14 of the Municipal Code includes provisions to protect the public health and safety by establishing and providing a mechanism for enforcing performance standards for private sewer laterals that connect or are connected to a public sewer main, and to maintain all parts of the sewer system and reduce and prevent sanitary sewer overflows.

Chapter 15.08 California Building Code

Chapter 15.08 of the Municipal Code implements the California Building Code on a local level with certain local amendments.

Chapter 15.12 California Plumbing Code

Chapter 15.12 of the Municipal Code implements the California Plumbing Code on a local level.

City of South San Francisco Zoning Ordinance

The following chapters of the South San Francisco Zoning Ordinance, including the new or revised chapters of the Zoning Ordinance that are part of the proposed project, assist in reducing or avoiding hazards related to geology and soils, and potential impacts to paleontological resources.

Chapter 20.170 Special Environmental Studies Overlay District (existing)

Section 20.170.004 (Seismic and Geologic Hazard Areas) (existing) states that all permit applications for projects located within areas of the Environmental Studies (ES) Overlay District that have been identified as susceptible to geologic hazards, as shown on a map or maps maintained by the City, require the preparation of site-specific soils and geologic reports approved by the City Engineer.

Chapter 20.300 Lot and Development Standards (revised)

Section 20.300.007 (Landscaping) (revised) includes a number of requirements for new construction or rehabilitated landscapes, including the preparation of a soil management report and grading design plan to reduce runoff.

Chapter 20.310 Site Building and Design Standards (new)

Section 20.310.002 (General Site and Building Design) (new) includes grading and drainage requirements for all projects throughout the City.

B. Grading
    1. Slopes of Cut/Fill Areas.
        a. Cut surfaces may not exceed 40 percent (two horizontal to one vertical).
        b. Fill slopes may not be constructed on natural slopes steeper than 50 percent and fill surfaces may not exceed 50 percent.
        c. Grading requires conditional approval from the Review Authority where:
            i. Slopes created by grading of the site exceed 30 percent; or
            ii. The grading is within 100 feet of a watercourse (top of bank) or any other water body.
    2. Height of Cut/Fill Areas.
        a. Where the height of the fill area is greater than five feet, new fill shall be benched into sound bedrock or other material as determined by a soils engineer or engineering geologist.
        b. Cut-and-fill banks shall not exceed 30 feet in height, vertically. In the cases of arterial streets, they may exceed 30 feet with the approval of the City Engineer.
    3. Fill Design Requirements.

a. All ground surface to be filled must be prepared to receive the fill by removing vegetation, noncomplying fill, topsoil and other unsuitable materials, and scarifying to provide a bond with the new fill.
b. No soils containing hazardous or toxic material of any kind may be used as fill. No rock, broken concrete, asphalt, or similar irreducible materials shall be used for fill.

4. Slope Stabilization. The faces of cut-and-fill slopes shall be prepared and maintained to control against erosion. This consists of planting, use of armor rock, terracing, water breaks, dams, cribbing, rip rap, or combinations thereof. Protection for the slopes shall be installed prior to final inspection. The building official may require installation of temporary measures as required to protect exposed areas until permanent measures can be taken.
5. Terraces. Terraces a minimum four feet in width shall be established at not more than fifteen-foot intervals on all cut or fill slopes to control surface drainage and debris. Where only one terrace is required, it shall be at mid-height.
6. Dust Control. Contractors performing grading operations within the city where dry conditions or dry admixtures are encountered shall adequately and effectively control dust to prevent spread off-site or onto existing structures on-site. Prior to commencement of grading operations, the contractor shall furnish details of proposed dust control measures to the building official for approval.
7. Protection of Trees. Construction vehicles and equipment and excavated soils shall be kept away from under the canopy of any trees on the site which are to be preserved.
8. Grading Plan Required. For any grading on a site with a natural slope of 15 percent or greater, a grading plan is required.

C. Drainage
1. All drainage plans that alter the slope of contour of a site's existing drainage pattern required the approval of the City Engineer.
2. Where possible, sites must drain directly into the Bay through drainage outfalls.
3. Cut-and-fill slopes shall be provided with subsurface drainage as necessary for stability. Paved interceptor drains shall be installed along the top of all cut slopes where the tributary drainage area above the slopes toward the cut has a drainage path greater than 40 feet measured horizontally.
4. All drainage facilities shall be designed to carry waters to the nearest drainage way approved by the appropriate jurisdiction.

3.6.4 - Methodology

Impacts related to geology, soils, and paleontological resources resulting from implementation of the proposed project (collectively, the General Plan Update, Zoning Code Amendments, and Climate Action Plan) are discussed below. The following impact analysis is based on a review of published information, surveys, and reports regarding regional geology and soils. Information was obtained from private and governmental agencies and Internet websites, including the CGS and the USGS.

3.6.5 - Thresholds of Significance

According to the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist, to determine whether impacts to geology and soils are significant environmental effects, the following questions are analyzed and evaluated. Would the proposed project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:
   i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
   ii. Strong seismic ground shaking?
   iii. Seismic-related ground failure, including liquefaction?
   iv. Landslides?

b) Result in substantial soil erosion or the loss of topsoil?

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the proposed project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

3.6.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Earthquakes

Impact GEO-1: **The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:**

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

ii) Strong seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction.

iv) Landslides.

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. Because South San Francisco is a fully built city, new development would primarily occur on parcels that already contain some existing homes or businesses, with the majority of potential growth occurring within the East of 101, Lindenville, Downtown, and El Camino planning sub-areas (Chapter 2, Project Description, Exhibit 2-5). Additionally, the proposed project may result in other private and public improvements throughout the City with the potential for environmental effects related to geology, soils, and seismicity (see Sections 2.5.2, 2.5.5, and 2.5.6, Chapter 2, Project Description).

Given the City's proximity to the San Andreas Fault Zone as well as other active faults, it is likely that the Planning Area would experience periodic minor to strong earthquake motion. As such, additional residents and employees would potentially be exposed to the effects of surface fault rupture, seismic ground shaking, liquefaction, settlement, and landslides from local and regional earthquakes. Structures that would be built on steep slopes could be exposed to an existing risk of landslide or, if improperly constructed, could exacerbate existing landslide conditions. New structures and other private and public improvements built under the proposed project could also experience substantial damage during seismic events. The proposed project identifies future land uses but does not describe specific development projects that would be undertaken during the 20-year planning horizon. Thus, estimating project-specific impacts would involve unreasonable speculation. As discussed below, policies and actions included in the General Plan Update, as well as the rules and regulations of the South San Francisco Municipal Code and Zoning Ordinance, address potential impacts related to surface fault rupture, seismic shaking, seismic-related ground failure, and landslides.

i) *Surface Fault Rupture*

The CGS has delineated an Alquist-Priolo Earthquake Fault Zone associated with the San Andreas Fault on the San Francisco South Regulatory Map.[23] Within the Planning Area, the Alquist-Priolo Earthquake Fault Zone is up to 1,200 feet wide, passes through the westernmost corner of the City, and contains Holocene-active strands of the San Andreas Fault Zone (Exhibit 3.6-3).[24] As depicted on the San Francisco South Regulatory Map, surface fault rupture occurred within the westernmost corner of the City during the 1906 San Francisco Earthquake.

As shown in Exhibit 2-5, the majority of potential growth under the proposed project would occur within the East of 101, Lindenville, Downtown, and El Camino planning sub-areas, all of which are outside the Alquist-Priolo Earthquake Fault Zone. Land uses within the Alquist-Priolo Earthquake Fault Zone are currently developed with urban uses and include low-density mixed use, medium-high density residential, medium-density residential, low-density residential, parks and recreation, and open space. As such, in the event of a large earthquake, people, structures, and infrastructure within those land uses could be exposed to the effects of surface fault rupture.

[23] California Geological Survey (CGS). 2021. Earthquake Zones of Required Investigation San Francisco South Quadrangle. September 23. Website: https://www.conservation.ca.gov/cgs/Documents/Publications/EZRIM/SAN_FRANCISCO_SOUTH_EZRIM_a11y.pdf. Accessed February 27, 2022.

[24] California Division of Mines and Geology (CDMG). Earthquake Planning Scenario for a Magnitude 8.3 Earthquake on the San Andreas Fault in the San Francisco Bay Area. Special Publication 61, 1982.

The General Plan Update includes policies and actions to minimize structural damage and minimize the exposure of people to risk of injury or death from structural failure in the event of surface fault rupture during an earthquake. Action CR-1.3.3 requires the City to enact an ordinance to require real estate disclosures of all hazards identified in the Hazard Mitigation Plan, including hazards associated with geologic hazards, for commercial and residential properties, including ownership and rental. Policy CR-1.4 requires the City to periodically adjust infrastructure design standards to address asset-specific vulnerabilities associated with the hazards. As part of the capital planning and budgeting process, Policy CR-1.5 requires all projects located within high hazard areas to adhere to risk assessment guidance and identify appropriate resilience strategies. Action CR-4.1.4 requires the City to incentivize retrofits of buildings and other mitigation measures in seismic and geologic hazards zones and explore developing a specific program to address seismic retrofit needs within South San Francisco's affordable housing stock. Lastly, Action CR-4.4.1 requires that permit applications for projects located within areas susceptible to geologic hazards, as shown on Figure 43 in the General Plan Update, prepare site-specific soils and geologic reports for review and approval by the City Engineer, and incorporation of the recommended actions during construction. Figure 43 identifies the westernmost corner of the City as being located within the Alquist-Priolo Earthquake Fault Zone, and therefore susceptible to geologic hazards such as surface fault rupture. Accordingly, as required by Action CR-4.4.1, future proposed projects located within the Alquist-Priolo Earthquake Fault Zone would be subject to conducting an environmental analysis at the time a specific project is defined, including preparation of site-specific soils and geologic reports for review and approval by the City Engineer, and incorporation of the recommended actions during construction.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, contains rules and regulations regarding development within the Alquist-Priolo Earthquake Fault Zone. Chapter 20.170 (existing) creates a Special ES Overlay District to protect the health, safety, and welfare of residents of the City by establishing regulations for addressing geologic hazards. Section 20.170.004 (Seismic and Geologic Hazard Areas) (existing) requires the preparation of site-specific soils and geologic reports for projects located within areas of the ES Overlay District that have been identified as susceptible to geologic hazards. Section 20.310.002 (General Site Building Design) (new) identifies grading and drainage requirements for all projects throughout the City, including those located within the Alquist-Priolo Earthquake Fault Zone.

Potential structural damage and exposure of people to risk of injury or death from structural failure associated with surface fault rupture would be reduced by compliance with CBC engineering design and construction measures. Foundations and other structural support features would be designed to resist or absorb damaging forces from strong ground shaking and surface fault rupture. Chapter 15.08 of the South San Francisco Municipal Code incorporates the most recent CBC. The South San Francisco Building Division reviews plans and applications for site clearance, grading, and building permits to ensure compliance with Chapter 15.08 (California Building Standards Code) and imposes requirements for revisions where needed to ensure that new or significantly remodeled structures are constructed in compliance with the CBC, and reflect any additional measures deemed appropriate. Permit issuance would be based upon satisfactory completion of any identified applicable measures.

With the implementation of the policies and actions in the General Plan Update, as well as applicable local codes, potential impacts associated with surface fault rupture within an Alquist-Priolo Earthquake Fault Zone would be less than significant.

ii) Strong Seismic Ground Shaking

The entire Planning Area is within a seismically active region that could experience strong ground shaking during a seismic event. In addition to the San Andreas Fault that traverses the westernmost corner of the City, other active faults in the vicinity of the Planning Area include the San Gregorio Fault, the Hayward Fault, and the Calaveras Fault. The estimated ground shaking intensities in the City, assuming a magnitude 7.2 earthquake on the Peninsula segment of the San Andreas Fault, are shown in Exhibit 3.6-2. The southwestern corner and most of the City east of El Camino Real is located within Zone VIII (Very Strong) and is estimated to experience moderate structural damage. The remainder of the City, including the portions fronting the San Francisco Bay, are located within Zone IX (Violent) and are estimated to experience heavy structural damage. However, the intensity of ground shaking will ultimately depend on the characteristics of the fault, distance from the fault, magnitude and duration of the earthquake, and site-specific geologic conditions.

The General Plan Update includes policies and actions to protect residents and employees of the City and surrounding areas from seismically induced hazards associated with strong seismic ground shaking. Action CR-4.1.1 requires the City to regularly complete seismic assessments of critical municipal buildings, facilities, and infrastructure and develop locally specific seismic hazard maps. Action CR-4.1.2 requires the City to regularly update the City's Building Code to incorporate current earthquake standards. Action CR-1.3.1 requires the City to participate in the San Mateo County Hazard Mitigation Plan maintenance protocols and Countywide initiatives, adopt the Hazard Mitigation Plan by reference upon update, and update emergency operations plans and protocols to account for regularly updated hazard information. Policy CR-1.4 requires the City to periodically adjust infrastructure design standards to address asset-specific vulnerabilities associated with the hazards. As part of the capital planning and budgeting process, Policy CR-1.5 requires all projects located within high hazard areas to adhere to risk assessment guidance and identify appropriate resilience strategies. Action CR-1.6.2 calls for the addition of a second floor to the City's EOC and a warehouse to store supplies to support the City in the event of a disaster, as well as ensure the EOC has the necessary capabilities and can continue operations after all future hazards. Action CR-1.6.3 requires the City to establish a community resilience education program in collaboration with San Mateo County and local community partners and work with the Community Emergency Response Team and promotores programs to disseminate the information. Lastly, Action CR-1.6.4 requires the City to identify locations for emergency housing, siting locations in areas with lower hazard risk, and Action CR-1.8.1 requires the City to create a post-disaster recovery framework that establishes post-disaster policies and programs designating when, where, and how rebuilding will occur.

Potential structural damage and exposure of people to risk of injury or death from structural failure associated with strong seismic ground shaking would be reduced by compliance with CBC engineering design and construction measures. Foundations and other structural support features would be designed to resist or absorb damaging forces from strong ground shaking. Chapter 15.08 of the South San Francisco Municipal Code incorporates the most recent CBC with certain local

amendments. The South San Francisco Building Division reviews plans and applications for site clearance, grading, and building permits to ensure compliance with Chapter 15.08 (California Building Standards Code) and imposes requirements for revisions where needed to ensure that new or significantly remodeled structures are constructed in compliance with the CBC, and reflect any additional measures deemed appropriate. Permit issuance would be based upon satisfactory completion of any identified applicable measures.

Compliance with mandatory CBC requirements and implementation of General Plan Update policies and actions would ensure that future development projects are appropriately investigated in terms of potential seismic hazards and that any new buildings and structures are constructed to withstand strong seismic ground shaking. Therefore, impacts would be less than significant.

iii) Seismic-related Ground Failure

Secondary effects of earthquake shaking may include landslides, slope instability, liquefaction, subsidence, and lateral spreading. As shown in Exhibit 3.6-4, the majority of the Planning Area is located within a low or moderate risk category for landslides. Portions of the City are hilly and underlain with weak bedrock with slopes greater than 15 percent and have the greatest susceptibility to landslides. In the Paradise Valley/Terrabay area, slopes required extensive stabilization, drainage improvements, and seismic mitigations when subdivisions were built; however, the slopes still pose elevated rockfall risks. As shown on Exhibit 3.6-5, areas near the San Francisco Bay have high ground failure potential, including liquefaction and settlement during earthquake shaking. Most of the lowland areas of the City have the potential for liquefaction hazards, with very high liquefaction potential in the East of 101 and Lindenville sub-areas, high potential along Colma Creek, and moderate potential in the alluvial fan of Colma Creek and in a narrow strip of land south of Sister Cities Boulevard. Liquefaction-induced lateral spreading could occur in the low-lying coastal areas and along Colma Creek.[25] As such, additional residents and employees, as well as buildings and infrastructure, could potentially be exposed to the effects of landslides, slope instability, liquefaction, subsidence, and lateral spreading from local and regional earthquakes.

As discussed under Impacts GEO-1 (i) and GEO-1 (ii), the South San Francisco Municipal Code and Zoning Ordinance and policies and actions of the General Plan Update which aim to protect residents, employees, structures, and infrastructure within the Planning Area from the effects of surface fault rupture and strong seismic ground shaking, would also protect against the secondary effects of earthquake shaking. Specifically, any development under the proposed project would be required to comply with Chapter 15.08 (California Building Code) of the South San Francisco Municipal Code, which implements the CBC and requires that foundations and other structural support features would be designed to resist or absorb damaging forces from strong ground shaking, liquefaction, and subsidence. Further, under Section 20.310.002 (General Site and Building Design) (new) of the South San Francisco Zoning Ordinance, a grading plan shall be required for any grading on a site with a natural slope of 15 percent or greater and all drainage plans that alter the slope of

[25] California Department of Conservation, California Geological Survey (CGS). 2021. Seismic Hazard Zone Report for the San Francisco South 7.5-Minute Quadrangle. Website: https://www.conservation.ca.gov/cgs/Documents/Publications/SHZR/SHZR_133_San_Francisco_South_a11y.pdf. Accessed February 27, 2022.

contour of a site's existing drainage pattern are required to obtain approval from the City Engineer. Lastly, the City has mapped areas subject to landslides, slope instability, liquefaction, subsidence, and lateral spreading as being within the ES Overlay District, for which site-specific soils and geologic reports would be required prior to development in accordance with Section 20.170.004 (Seismic and Geologic Hazard Areas) (existing) of the South San Francisco Zoning Ordinance. Accordingly, future proposed projects located within areas susceptible to seismic-related ground failure would be required to conduct an environmental analysis at the time a specific project is defined, including preparation of site-specific soils and geologic reports for review and approval by the City Engineer, and incorporation of the recommended actions during construction. Therefore, impacts related to seismic-related ground failure, such as liquefaction, ground settlement, lurching, lateral spreading, and ground cracking would be less than significant.

iv) Landslides

As shown in Exhibit 3.6-4, the majority of the Planning Area is located within a low or moderate risk category for landslides. Portions of the City are hilly and underlain with weak bedrock with slopes greater than 15 percent and have the greatest susceptibility to landslides. In the Paradise Valley/Terrabay area, slopes required extensive stabilization, drainage improvements, and seismic mitigations when subdivisions were built; however, the slopes still pose elevated rockfall risks. As such, additional residents and employees, as well as buildings and infrastructure, could potentially be exposed to landslides.

The General Plan Update includes a number of policies and actions specifically designed to protect individuals from injuries and minimize property damage resulting from land instability by limiting development in certain areas and requiring increased review and mitigation where appropriate. Policy CR-4.3 discourages development on steep hillside areas more than 30 percent grade and requires that development of hillside sites follow existing contours to the greatest extent possible and that grading is kept to a minimum. Action CR-1.3.3 calls for the City to enact an ordinance to require real estate disclosures of all hazards identified in the Hazard Mitigation Plan. Policy CR-1.4 requires the City to periodically adjust infrastructure design standards to address asset-specific vulnerabilities associated with the hazards. As part of the capital planning and budgeting process, Policy CR-1.5 requires all projects located within high hazard areas to adhere to risk assessment guidance and identify appropriate resilience strategies.

The South San Francisco Municipal Code also contains rules and regulations to address development on lands susceptible to landslides. According to Section 20.310.002 (General Site and Building Design) (new) of the South San Francisco Zoning Ordinance, a grading plan shall be required for any grading on a site with a natural slope of 15 percent or greater. In addition, cut surfaces may not exceed 50 percent (two horizontal to one vertical), fill slopes may not be constructed on natural slopes steeper than 50 percent and fill surfaces may not exceed 50 percent. Under Section 20.310.002, grading requires conditional approval from the Review Authority where: (1) slopes created by grading of the site exceed 30 percent; or (2) the grading is within 100 feet of a watercourse (top of bank) or any other water body. Lastly, Section 20.310.002 requires that all drainage plans that alter the slope of contour of a site's existing drainage pattern obtain approval from the City Engineer. In addition, development within hillsides would comply with Chapter 15.08

(California Building Standards Code) of the South San Francisco Municipal Code, which incorporates the most recent CBC with certain local amendments. The South San Francisco Building Division reviews plans and applications for site clearance, grading, and building permits to ensure compliance with Section 20.310.002 and Chapter 15.08 and imposes requirements for revisions where needed to ensure that new or significantly remodeled structures are constructed in compliance with these requirements, and reflect any additional measures deemed appropriate. Permit issuance would be based upon satisfactory completion of any identified applicable measures.

Accordingly, future projects would be required to conduct an environmental analysis at the time a specific project is defined. In reviewing individual project applications, the City would determine which policies and actions apply, and which sections of the Municipal Code and Zoning Ordinance apply, depending on the specific characteristics of the project type and/or project site during the development review process. Therefore, impacts related to landslides would be less than significant.

Conclusion

In conclusion, compliance with local codes, mandatory CBC requirements, and implementation of General Plan Update policies and actions, would ensure that future development projects are appropriately investigated in terms of potential seismic hazards and that any new buildings and structures are constructed to withstand the anticipated range of seismic events. At the programmatic level, seismic impacts would be reduced to a less than significant level. Consistent with General Plan Update policies and actions and the rules and regulation of the Municipal Code and Zoning Ordinance, individual development projects would be required to undergo project-specific environmental review, which may require additional site-specific or project-specific measures to reduce any potential for loss, injury, or death in the event of a seismic event. As such, potential impacts would be less than significant.

Level of Significance

Less than significant impact.

Soil Erosion or Topsoil Loss

Impact GEO-2: The proposed project would not result in substantial soil erosion or the loss of topsoil.

Development under the proposed project would involve construction activities such as stockpiling, grading, excavation, paving, and other earth-disturbing activities. Loose and disturbed soils are more prone to erosion and loss of topsoil by wind and water. As such, soil erosion is dependent on individual site locations and conditions on-site during construction.

Construction activities that disturb one or more acre of land surface are subject to the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2012-0006-DWQ) adopted by the California State Water Resources Control Board (State Water Board). Compliance with the permit requires each qualifying development project to file a Notice of Intent with the State Water Board. Permit conditions require development of a SWPPP, which must describe the site, facility, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, control of

construction sediment and erosion control measures, maintenance responsibilities, and non-stormwater management controls. Inspection of construction sites before and after a storm is also required to identify stormwater discharge from construction activity and to identify and implement erosion controls, where necessary.

The General Plan Update includes policies and actions that would reduce soil erosion and loss of topsoil. Policy CR-4.3 requires that development of hillside sites follow existing contours to the greatest extent possible and that grading should be kept to a minimum. Policy ES-7.1 requires the City to partner with regional and local agencies to develop a comprehensive watershed management strategy that identifies programs, partnerships, actions, and incentives that the City and partners can take to protect the City's water resources and aquatic areas. Policy ES-7.3 requires that new development and redevelopment projects meet federal, State, regional, and local stormwater requirements, including site design, stormwater treatment, stormwater infiltration, peak flow reduction, and trash capture.

The South San Francisco Municipal Code and Zoning Ordinance also contains rules and regulations to minimize soil erosion and the loss of topsoil. Chapter 15.08 (California Building Code) of the Municipal Code incorporates the most recent CBC, which regulates grading activities, including drainage and erosion control. Section 20.300.007 (Landscaping) (revised) of the Zoning Ordinance includes a number of requirements for new construction or rehabilitated landscapes, including the preparation of a soil management report and grading design plan to reduce runoff. Section 14.04.132 (Site design measures for non-regulated projects) of the Municipal Code states that all new development and redevelopment projects are encouraged to include adequate site design measures that include minimizing land disturbance and impervious surfaces. Section 14.04.180 (Reduction of pollutants in stormwater) of the Municipal Code requires BMPs for all construction sites in the City for erosion control, run-on and runoff control, sediment control, active treatment systems (as appropriate), and good site management through all phases of construction (including, but not limited to, site grading, building, and finishing of lots) until the site is stabilized by landscaping or the installation of permanent erosion control measures.

In addition to compliance with mandatory NPDES permit and South San Francisco Municipal Code and Zoning Ordinance requirements, implementation of General Plan Update policies and actions would further reduce potential soil erosion and loss of topsoil from construction-related soil disturbance. As such, potential impacts related to soil erosion and loss of topsoil would be reduced to less than significant levels.

Level of Significance

Less than significant impact.

Unstable Geologic Location

Impact GEO-3:	**The proposed project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the proposed project, and potentially result in a settlement, an on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.**

As discussed previously in Impacts GEO-1(iii) and GEO-1(iv), certain geologic units present in the Planning Area could have the potential for landslides, slope instability, rock falls, liquefaction, settlement, and liquefaction-induced lateral spreading. Other geologic hazards, such as subsidence or collapse, are also present in the Planning Area. As such, development allowed under the proposed project could occur within areas containing unstable geologic units or be located on soils that are unstable or could become unstable from such development.

As described in Impacts GEO-1(iii) and GEO-1(iv), any development under the proposed project would be required to comply with Chapter 15.08 (California Standards Building Code) of the South San Francisco Municipal Code, which implements the CBC on a local level with certain local amendments. The CBC includes requirements to address development on areas containing unstable geologic units or in areas where soil is unstable. Typical measures to treat unstable soil conditions involve removal, proper fill selection, and compaction. In cases where soil remediation is not feasible, the CBC requires structural reinforcement of foundations to resist forces of being located within unstable geologic units or unstable soils. In addition, the City has mapped areas containing unstable geologic units or unstable soils as being within the ES Overlay District, for which site-specific soils and geologic reports would be required prior to development in accordance with Section 20.170.004 (Seismic and Geologic Hazard Areas) (existing) of the South San Francisco Zoning Ordinance. Section 20.310.002 (General Site and Building Design) (new) of the Zoning Ordinance includes additional grading and drainage requirements for development of hillside sites.

In addition, the General Plan Update includes policies and actions specifically designed to protect individuals from injuries and minimize property damage resulting from development on unstable geologic units or unstable soils by limiting development in certain areas and requiring increased review and mitigation where appropriate. Policy CR-4.3 discourages development on steep hillside areas more than 30 percent grade and requires that development of hillside sites follow existing contours to the greatest extent possible and that grading is kept to a minimum. Action CR-1.3.3 requires the City to enact an ordinance to require real estate disclosures of all hazards identified in the Hazard Mitigation Plan, including hazards associated with geologic hazards for commercial and residential properties. Policy CR-4.1, which requires the City to protect existing and new buildings, infrastructure, and other assets from seismic hazards, would also be protective of development within unstable geologic units or unstable soils. Action CR-4.1.4 requires the City to expand efforts to incentivize retrofits of buildings and other mitigation measures in geologic hazards zones. Policy CR-4.4 requires the City to protect existing and new buildings, infrastructure, and other assets from other geologic hazards, including landslides, slope instability, liquefaction, settlement, subsidence, unstable geologic units, unstable soils, and expansive soils. Action CR-4.4.1 requires that permit applications for projects located within areas susceptible to geologic hazards, as shown on Figure 43 of the General Plan Update, prepare site-specific soils and geologic reports for review and approval by the City Engineer and incorporate the recommended actions during construction.

While analyzing the potential future effects of implementing the proposed project necessarily involves some degree of forecasting, identifying specific examples of what could happen as a result of an individual development proposal is too speculative at this time. Accordingly, future proposed projects located within areas containing unstable geologic units or unstable soils would be required to conduct an environmental analysis at the time a specific project is defined, including preparation

of site-specific soils and geologic reports for review and approval by the City Engineer, and incorporation of the recommended actions during construction.

Therefore, with the implementation of the policies and actions in the General Plan Update, as well as applicable State and local codes, potential impacts associated with development on unstable geologic units or unstable soils would be less than significant.

Level of Significance

Less than significant impact.

Expansive Soil

Impact GEO-4:	**The proposed project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.**

New development constructed on expansive soils could be subject to damage or become unstable when underlying soil shrinks or swells. Expansive soils in the City are generally located within the Colma Formation which runs horizontally through the central portion of the City.[26] Along the eastern perimeter of the City near San Francisco Bay is primarily artificial fill—artificial fill over tidal flats, Alluvium, and slope debris and ravine fill—all of which are susceptible to damage from expansive soils.[27]

Any development under the proposed project would be required to comply with Chapter 15.08 of the South San Francisco Municipal Code, which implements the CBC on a local level with certain local amendments. The CBC includes requirements to address soil-related hazards, such as expansive soils. Typical measures to treat hazardous soil conditions involve removal, proper fill selection, and compaction. In cases where soil remediation is not feasible, the CBC requires structural reinforcement of foundations to resist expansive soil forces. Further, under Section 20.310.002 (new) of the South San Francisco Zoning Ordinance, future projects would be required to comply with grading and drainage requirements, including those related to expansive soils. Lastly, the City has mapped areas subject to expansive soils as being within the ES Overlay District, for which site-specific soils and geologic reports would be required prior to development in accordance with Section 20.170.004 (existing) of the South San Francisco Zoning Ordinance. Accordingly, future proposed projects located within areas susceptible to expansive soils would be required to conduct an environmental analysis at the time a specific project is defined, including preparation of site-specific soils and geologic reports for review and approval by the City Engineer, and incorporation of the recommended actions during construction.

Furthermore, the General Plan Update includes a number of policies and actions specifically designed to protect residents from injuries and minimize property damage resulting from geologic hazards, such as expansive soils. Action CR-1.3.3 calls for the City to enact an ordinance to require real estate disclosures of all hazards identified in the Hazard Mitigation Plan. Policy CR-4.1, which requires the City to protect existing and new buildings, infrastructure, and other assets from seismic

[26] United States Geological Survey (USGS). 1998. Preliminary Geologic Map of the San Francisco South 7.5' Quadrangle and Part of the Hunters Point 7.5' Quadrangle, San Francisco Bay Area, California.
[27] Ibid.

hazards, would also be protective of development on expansive soils. Policy CR-1.4 requires the City to periodically adjust infrastructure design standards to address asset-specific vulnerabilities associated with the hazards. As part of the capital planning and budgeting process, Policy CR-1.5 requires all projects located within high hazard areas to adhere to risk assessment guidance and identify appropriate resilience strategies. Policy CR-4.4 requires the City to protect existing and new buildings, infrastructure, and other assets from other geologic hazards, including landslides, slope instability, liquefaction, settlement, subsidence, unstable geologic units, unstable soils, and expansive soils. Action CR-4.4.1 requires that permit applications for projects located within areas susceptible to geologic hazards, as shown on Figure 43 of the General Plan Update, prepare site-specific soils and geologic reports for review and approval by the City Engineer and incorporate the recommended actions during construction.

Compliance with the rules and regulations of the South San Francisco Municipal Code and Zoning Ordinance, including compliance with the CBC, and implementation of the policies and actions in the General Plan Update, would ensure that potential impacts related to expansive soils remain less than significant.

Level of Significance

Less than significant impact.

Wastewater Disposal Systems

Impact GEO-5:	**The proposed project would not 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.**

The proposed project encourages growth management and development within the Planning Area. Under the proposed project, the location and timing of growth in the City would be planned, considering infrastructure capacity, public service availability, and fiscal impacts. Because South San Francisco is a fully built city, new development would primarily occur on parcels that already contain some existing homes or businesses, with the majority of potential growth occurring within the East of 101, Lindenville, Downtown, and El Camino planning sub-areas (Chapter 2, Project Description, Exhibit 2-5). As such, development facilitated by the proposed project would be served by the existing sewer system, and most new development would connect to existing sewer lines.

However, should any new development require the installation of septic tanks or alternative wastewater disposal systems, the General Plan Update includes policies and actions to ensure that any new development can be feasibly constructed according to soil conditions. Policy CR-4.3 discourages development on steep hillside areas more than 30 percent grade and requires that development of hillside sites follow existing contours to the greatest extent possible and that grading is kept to a minimum. Policy CR-4.1, which requires the City to protect existing and new buildings, infrastructure, and other assets from seismic hazards, would also ensure that the development of septic tanks or alternative wastewater disposal systems can be constructed according to soil conditions. Policy CR-4.4 requires the City to protect existing and new buildings, infrastructure, and other assets from other geologic hazards, including landslides, slope instability, liquefaction, settlement, subsidence, unstable geologic units, unstable soils, and expansive soils. Action CR-4.4.1

requires that permit applications for projects located within areas susceptible to geologic hazards, as shown on Figure 43 of the General Plan Update, prepare site-specific soils and geologic reports for review and approval by the City Engineer and incorporate the recommended actions during construction.

Chapter 14.14 (Sewer Lateral Construction, Maintenance, and Inspection) of the South San Francisco Municipal Code includes provisions to protect the public health and safety by establishing and providing a mechanism for enforcing performance standards for private sewer laterals that connect or are connected to a public sewer main, and to maintain all parts of the sewer system and reduce and prevent sanitary sewer overflows. In particular, Section 14.14.050 (Permits—General) requires that a permit be obtained for the installation of individual waste disposal systems including septic systems and that all work comply with the provisions of Chapter 14.14, including design standards and construction standards. Chapter 15.12 (California Plumbing Code) of the South San Francisco Municipal Code implements the California Plumbing Code on a local level, and includes construction requirements for the installation of septic tanks or alternative wastewater disposal systems.

Implementation of policies and actions in the General Plan Update, as well as applicable local codes, would ensure that new septic tanks or alternative wastewater disposal systems are constructed on soils that can support such systems. Therefore, impacts would be less than significant.

Level of Significance

Less than significant impact.

Destruction of Paleontological Resource or Unique Geologic Feature

Impact GEO-6:	**The proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.**

Any project involving earthmoving activity could potentially result in inadvertent discovery and disturbance of paleontological resources during grading and excavation work. Based on the paleontological records search conducted for the proposed project, the potentially fossiliferous areas in the Planning Area are the Merced Formation and the Colma Formation (Exhibit 3.6-3). The Merced Formation is located along the western portion of the Planning Area and has a high sensitivity and a moderate potential for significant paleontological resources. The Colma Formation is located in the central portion of the Planning Area and in parts of the eastern portion of the Planning Area and has a high paleontological sensitivity and a low paleontological potential. As such, construction-related and earth-disturbing actions from development facilitated by the proposed project within the Merced Formation and Colma Foundation have the potential to damage or destroy fossils resulting in significant impacts on paleontological resources. Mitigation Measure (MM) GEO-6 requires paleontological monitoring of all proposed excavations within the Merced Formation and Colma Formation. As such, with implementation of MM GEO-6, potential impacts to paleontological resources would be reduced to less than significant.

The remaining portions of the Planning Area have a low paleontological sensitivity and low paleontological potential. Nonetheless, in the unlikely event that any earth-disturbing construction-related activities uncover significant paleontological resources (e.g., bones, teeth, well-preserved

plant elements), potential impacts to paleontological resources would be minimized through compliance with federal and State laws that protect paleontological resources. Section 5097 of the Public Resources Code specifies procedures to be followed in the event of unexpected discovery of paleontological resources. Compliance with Section 5097 of the Public Resources Code would minimize the potential to impact paleontological resources directly and indirectly within the portions of the Planning Area that have a low paleontological sensitivity and low paleontological potential, and impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM GEO-6 Applicants, owners, and/or sponsors of all future development or construction projects shall be required to perform or provide paleontological monitoring for all proposed excavations in the Colma Formation and Merced Formation, including those buried in the shallow subsurface below Quaternary deposits, due to the high paleontological sensitivity for significant resources in these areas. Should significant paleontological resources (e.g., bones, teeth, well-preserved plant elements) be unearthed by the future project construction crew, the project activities shall be diverted at least 15 feet from the discovered paleontological resources until a professional vertebrate Paleontologist has assessed such discovered resources and, if deemed significant, such resources shall be salvaged in a timely manner. The applicant/owner/sponsor of said project shall be responsible for diverting project work and providing the assessment including retaining a professional vertebrate Paleontologist for such purpose. Collected fossils shall be deposited by the applicant/owner/sponsor in an appropriate repository (e.g., University of California Museum of Paleontology (UCMP), California Academy of Sciences) where the collection shall be properly curated and made available for future research.

Level of Significance After Mitigation

Less than significant impact.

3.6.7 - Cumulative Impacts

The geographic context for analysis of cumulative impacts related to geology, soils, and seismicity includes the South San Francisco Planning Area. The geographic context for paleontological resources includes San Mateo County. This analysis evaluates whether impacts of the proposed project, together with impacts of cumulative development, could result in a cumulatively significant impact to geology, soils, seismicity, or paleontological resources. This analysis then considers whether incremental contribution of impacts associated with implementation of the proposed project would be significant. Both conditions must apply for a project's cumulative effects to rise to the level of significance.

Potentially adverse environmental effects associated with seismic hazards, as well as those associated with expansive soils, unstable geologic units, unstable soils, landslides, and erosion, usually are site-specific and generally do not result in cumulative effects.

Cumulative projects would be exposed to similar ground shaking during seismic events, but development of individual projects would not increase the potential for impacts to occur. Individual development proposals would be reviewed separately by the appropriate public agency depending on location and undergo environmental review if appropriate. In the event that future cumulative development would result in impacts related to geologic or seismic impacts, those potential project or site-specific impacts would be addressed in accordance with the requirements of CEQA. New buildings would be constructed utilizing current design and construction methodologies for earthquake resistant design as required by relevant regulations, including the San Mateo County Code of Ordinances. Compliance with the CBC, NPDES permits, laws and regulations mentioned above would ensure that cumulative development would have less than significant impacts associated with geology, soils, or seismicity.

As previously discussed, development facilitated by the proposed project would be required to comply with provisions of the CBC, excavation and grading requirements of the South San Francisco Municipal Code and Zoning Ordinance including enhanced policies and actions developed as part of the General Plan Update, and mandatory NPDES permit requirements to ensure that potential impacts related to site-specific geotechnical conditions remain at less than significant levels. For these reasons, the proposed project's contribution to cumulative impacts on geology, soils, and seismicity are not cumulatively considerable and the cumulative impact would be less than significant.

As cumulative development occurs, all future projects must comply with the federal, State, and pertinent local regulations regarding structural stability, resulting in less than significant cumulative impacts related to subsidence or collapse. Moreover, the proposed project would not contribute to a cumulative impact on liquefaction, lateral spreading, or landslides. As discussed above, impacts related to subsidence or collapse are less than significant with implementation of the General Plan Update's policies and actions, as well as compliance with the rules and regulations of the South San Francisco Municipal Code and Zoning Ordinance. Since the proposed project would experience less than significant impacts associated with subsidence or collapse impacts and these potential impacts are site-specific, the proposed project's contribution to cumulative subsidence or collapse is less than cumulatively considerable, and thus less than cumulatively significant.

Cumulative development within the Planning Area could propose to install septic tanks or alternative wastewater disposal systems, particularly within areas under the jurisdiction of San Mateo County. Cumulative development would not contribute to potential impacts on the soils related to septic tanks or alternative wastewater disposal systems since new development would be required to demonstrate that soils are capable of supporting septic tanks or alternative wastewater disposal systems. As discussed above, impacts related to soils supporting septic tanks or alternative wastewater disposal systems are less than significant with implementation of the General Plan Update's policies and actions, as well as compliance with the rules and regulations of the South San Francisco Municipal Code and Zoning Ordinance. Therefore, implementation of the proposed project

would not contribute to potential cumulative impacts related to soils supporting septic systems or alternative wastewater disposal systems and potential cumulative impacts would be reduced to less than significant. Moreover, the proposed project's incremental contribution to these less than significant cumulative impacts would not be significant. As the City receives development applications for subsequent development under the proposed project, those applications would be reviewed by the City for compliance with the policies and actions of the General Plan Update and would be required to demonstrate that soils are capable of supporting septic tanks or alternative wastewater disposal systems. Therefore, the proposed project would not contribute to cumulative impacts and would have less than significant impacts related to soils that are incapable of supporting septic systems.

Future development in San Mateo County has potential to cumulatively impact paleontological resources. However, all cumulative projects would be required to comply with federal and State policies related to protection of paleontological resources which reduces potential cumulative impacts to paleontological resources to less than significant. Moreover, the proposed project's incremental contribution to less than significant cumulative impacts would not be significant. As the City receives development applications for subsequent development under the proposed project, those applications would be reviewed by the City of South San Francisco for compliance with MM GEO-6, which requires paleontological monitoring for all proposed excavations in the Colma Formation and Merced Formation, including those buried in the shallow subsurface below Quaternary deposits. Future development under the proposed project would also be required to conform to federal and State policies that protect paleontological resources, including Section 5097 of the California Public Resources Code. For these reasons, the proposed project's contribution to cumulative impacts on paleontological resources are not cumulatively considerable and would be less than significant.

Level of Significance

Less than significant impact.

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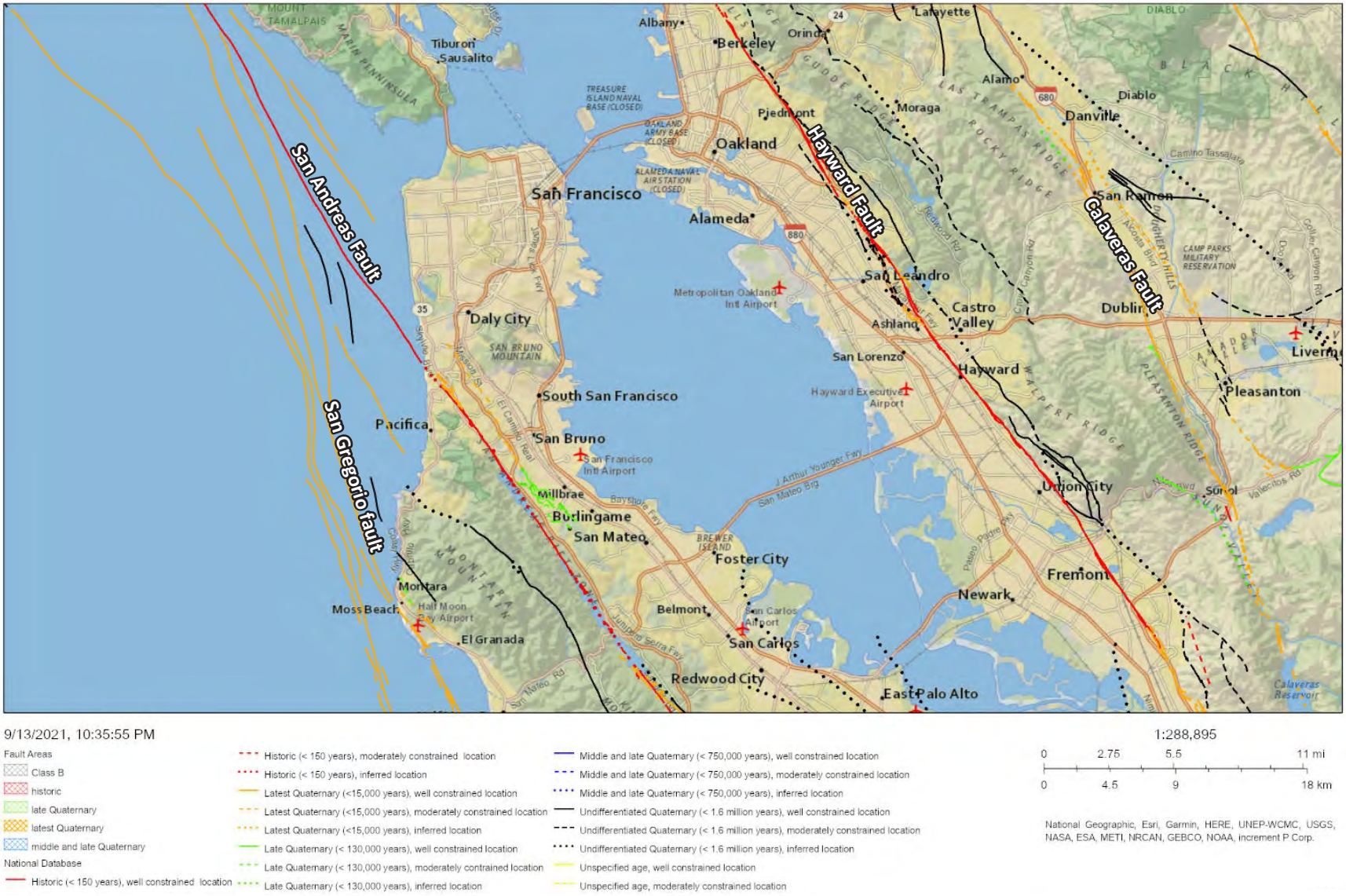

Source: USGS, National Geographic, ESRI.

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Exhibit 3.6-1
Regional Faulting Map

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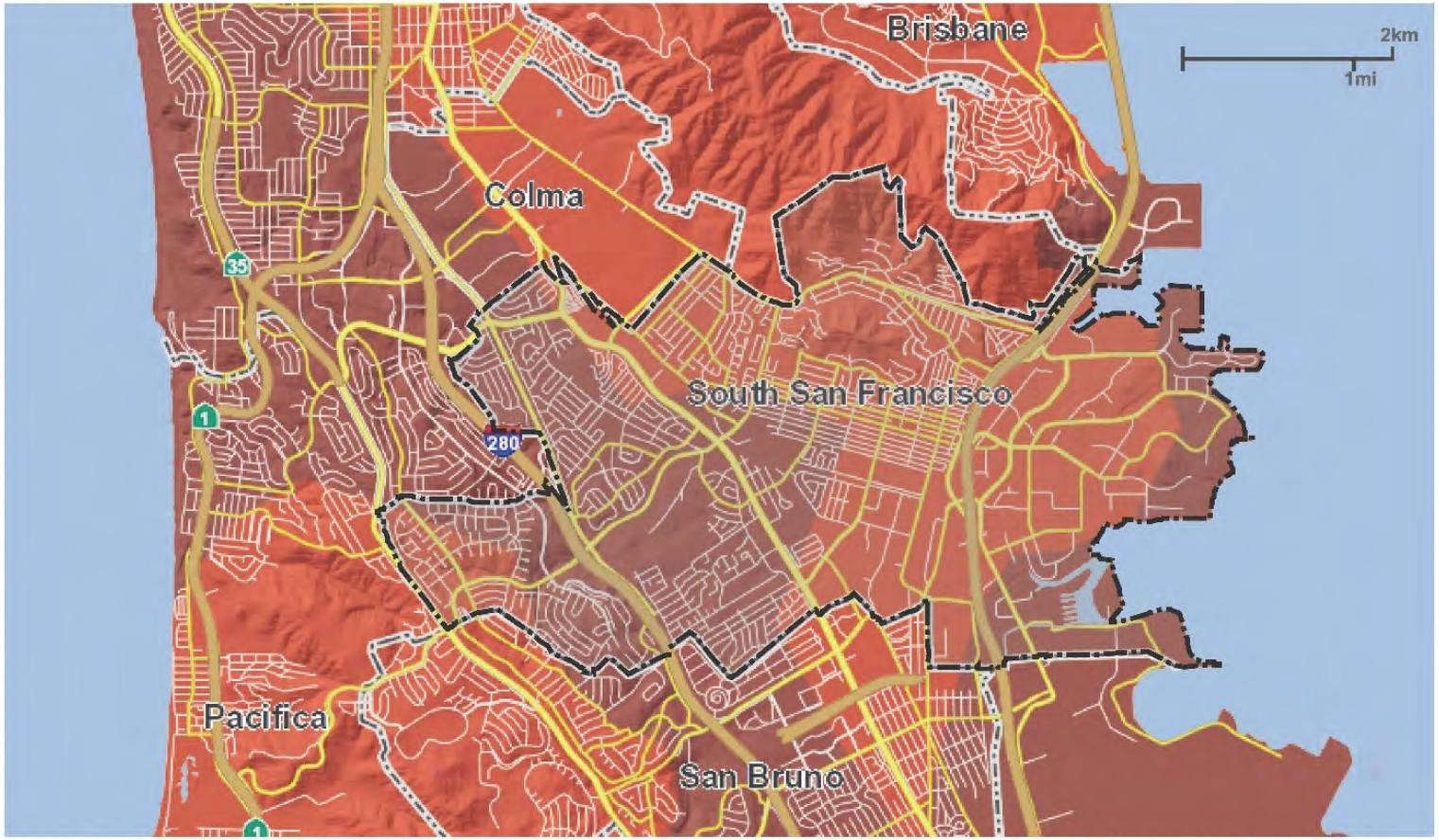

Note: This figure represents the shaking scenario from a rupture of the Peninsula Segment of the San Andreas Fault during an earthquake with a 7.2 magnitude.

Legend

City of South San Francisco

Modified Mercalli Intensity Shaking Severity Level

- Light - V
- Moderate - VI
- Strong - VII
- Very Strong - VIII
- Violent - IX
- Very Violent - X

Source: South San Francisco General Plan Update.

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Exhibit 3.6-2
Ground Shaking

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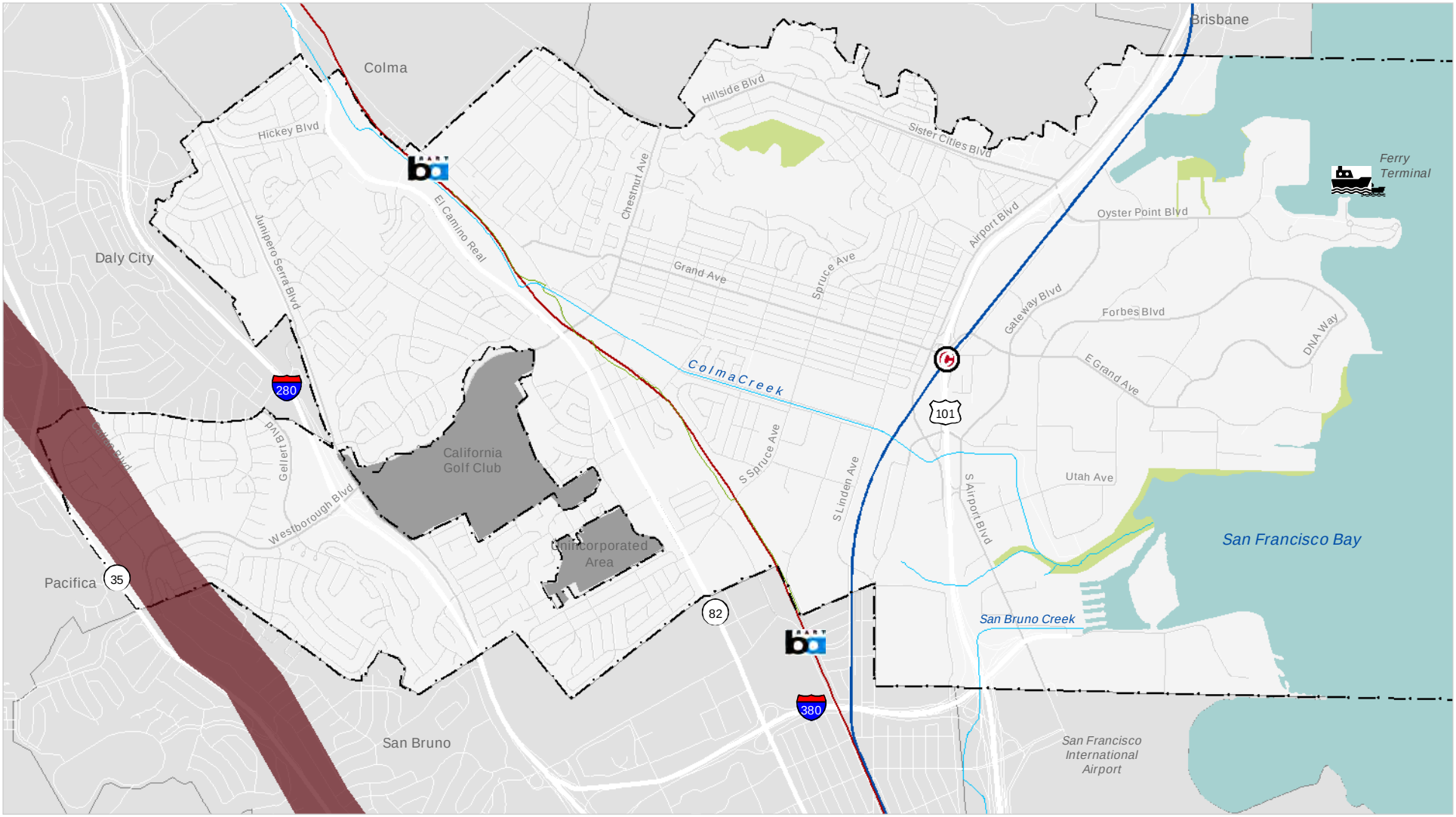

Jurisdictional Boundary

- City of South San Francisco
- Other City Boundaries
- Sphere of Influence

Transportation Features

- BART
- Caltrain
- Highway
- Arterial
- Local Street

Legend

- Alquist-Priolo Earthquake Fault Zone
- Streams
- Centennial Way Trail

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3,000 1,500 0 3,000 Feet

Exhibit 3.6-3
Alquist-Priolo Fault Zones

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Source: South San Francisco General Plan Update.

Jurisdictional Boundary

- City of South San Francisco
- Other City Boundaries
- Sphere of Influence

Transportation Features

- BART
- Caltrain
- Highway
- Arterial
- Local Street

Landslide Susceptibility

- Moderate incidence
- Low incidence

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3,000 1,500 0 3,000 Feet

Exhibit 3.6-4
Landslide Potential

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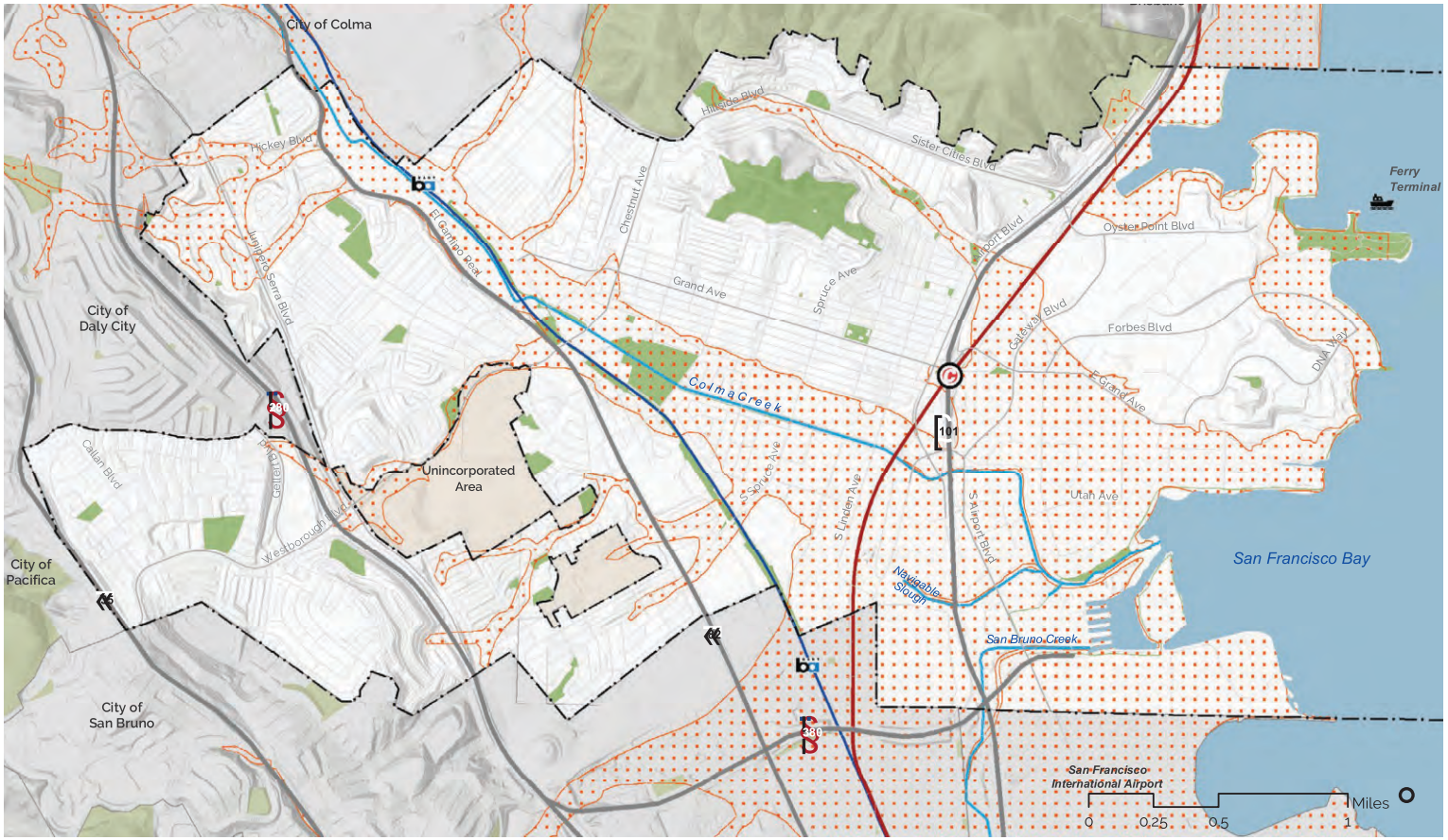

Sources: CGS (2021); City of South San Francisco (2019); County of San Mateo (2019); ESRI (2021).

Liquefaction Risk

- Liquefaction Zone
- City of South San Francisco
- Unincorporated Area in City Sphere
- Ferry Terminal Station
- Caltrain Station
- Caltrain
- BART Station
- BART
- Highway
- Arterial Road
- Local Road
- City Parks, Open Space, & Joint Facilities
- Context Parks
- Waterbody
- Streams

Source: South San Francisco General Plan Update.

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Exhibit 3.6-5
Liquefaction Potential

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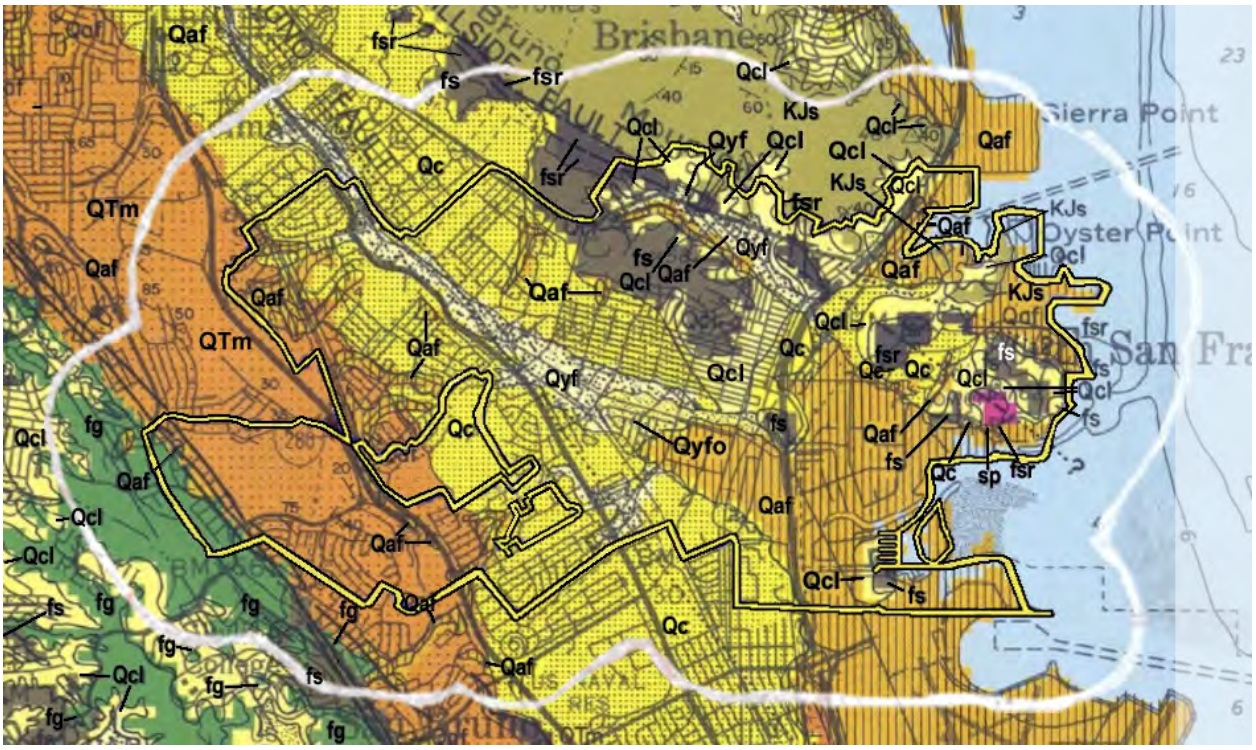
MAP LEGEND

Qyf	Qyf	Younger (inner) alluvial fan deposits (Holocene
Qyfo	Qyfo	Younger (outer) alluvial fan deposits (Holocene)
Qcl	Qcl	Colluvium (Holocene)
Qal	Qal	Alluvium (Holocene)
Qaf	Qaf	Artificial fill (Holocene)
Qc	Qc	Colma Formation (Pleistocene)
QTm	QTm	Merced Formation (upper Pliocene & lower Pleistocene)

<u>Franciscan Complex</u> (Jurassic–Cretaceous)

KJs	KJs	Unnamed sandstone
fg	fg	Greenstone
fs	fs	Sandstone
fsr	fsr	Sheared rock
sp	sp	Serpentinite



Source: Brabb and Pampeyan (1983)

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Exhibit 3.6-6
Geologic Map of Planning Area

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3.7 - Greenhouse Gas Emissions

3.7.1 - Introduction

This section of the Draft Program Environmental Impact Report (Draft Program EIR) addresses potential physical environmental effects related to greenhouse gas (GHG) emissions within the South San Francisco General Plan Update Planning Area (Planning Area), including whether the proposed project would conflict with applicable plans, policies or regulations adopted for the purpose of reducing GHG emissions, or generate GHG emissions, either directly or indirectly, that would have a significant effect on the environment, resulting from implementation of the General Plan Update, Zoning Code Amendments, and updated 2022 Climate Action Plan (CAP) (collectively referred to herein as the proposed project). Future discretionary projects facilitated by the proposed project will be evaluated for project-specific impacts related to GHG emissions at the time they are proposed.

The following comments related to GHG were received in response to the Notice of Preparation (NOP). The comment letters are included in Appendix A.

- Recommends that the Draft Program EIR include a robust Transportation Demand Management (TDM) Program and provide a list of measures to reduce Vehicle Miles Traveled (VMT) and GHG emissions.
- Recommends that housing and mixed-uses be located near Bay Area Rapid Transit (BART) in order to help mitigate climate change by discouraging vehicle use.
- Recommends that the GHG impact analysis include an evaluation of the General Plan Update's consistency with the most recent Assembly Bill (AB) 32 Scoping Plan and the State's 2030 and 2050 climate goals.
- Recommends that the Draft Program EIR evaluate all feasible measures to minimize GHG impacts.
- Recommends that the Draft Program EIR evaluate the General Plan Update's consistency with the Air District's 2017 Clean Air Plan, the draft City of South San Francisco CAP (2022), and the San Mateo County's Sea Level Rise Vulnerability Assessment (2018).

The descriptions and analysis in this section are based, in part, on statements, data, and figures provided by the following reference materials:

- South San Francisco General Plan Update
- South San Francisco 2014 Climate Action Plan
- South San Francisco 2022 Draft Climate Action Plan
- California's 2017 Climate Change Scoping Plan, California Air Resources Board, November 2017
- Plan Bay Area 2050, Metropolitan Transportation Commission and Association of Bay Area Governments, Adopted October 21, 2021
- 2017 Clean Air Plan, Bay Area Air Quality Management District, April 2017

- Traffic modeling and analysis prepared by Fehr & Peers (see Section 3.14, Transportation)

3.7.2 - Environmental Setting

Greenhouse Effect, Global Warming, and Climate Change

Most of the energy that affects the Earth's climate comes from the sun. Some solar radiation is absorbed by the Earth's surface, and a smaller portion of this radiation is reflected by the atmosphere back toward space. As the Earth absorbs high-frequency solar radiation, its surface gains heat and then re-radiates lower frequency infrared radiation back into the atmosphere.[1]

Most solar radiation passes through gases in the atmosphere classified as GHGs; however, infrared radiation is selectively absorbed by GHGs. GHGs in the atmosphere play a critical role in maintaining the balance between the Earth's absorbed and radiated energy, the Earth's radiation budget,[2] by trapping some of the infrared radiation emitted from the Earth's surface that otherwise would have escaped to space (Figure 3.7-1). Radiative forcing is the difference between the incoming energy and outgoing energy.[3] Specifically, GHGs affect the radiative forcing of the atmosphere,[4] which in turn affects the Earth's average surface temperature. This phenomenon, the *greenhouse effect*, keeps the Earth's atmosphere near the surface warmer than it would be otherwise and allows successful habitation by humans and other forms of life.

Combustion of fossil fuels and deforestation release carbon into the atmosphere that historically has been stored underground in sediments or in surface vegetation, thus exchanging carbon from the geosphere and biosphere to the atmosphere in the carbon cycle. With the accelerated increase in fossil fuel combustion and deforestation since the Industrial Revolution of the nineteenth century, concentrations of GHGs in the atmosphere have increased exponentially. Such emissions of GHGs in excess of natural ambient concentrations contribute to the enhancement of the natural greenhouse effect. This enhanced greenhouse effect has contributed to *global warming*, an increased rate of warming of the Earth's average surface temperature.[5] Specifically, increases in GHGs lead to increased absorption of infrared radiation by the Earth's atmosphere and warm the lower atmosphere further, thereby increasing temperatures and evaporation rates near the surface.

Variations in natural phenomena such as volcanoes and solar activity produced most of the global temperature increase that occurred during preindustrial times; more recently, however, increasing atmospheric GHG concentrations resulting from human activity have been responsible for most of the observed global temperature increase.[6]

---

1 Frequencies at which bodies emit radiation are proportional to temperature. The Earth has a much lower temperature than the sun and emits radiation at a lower frequency (longer wavelength) than the high-frequency (short-wavelength) solar radiation emitted by the sun.

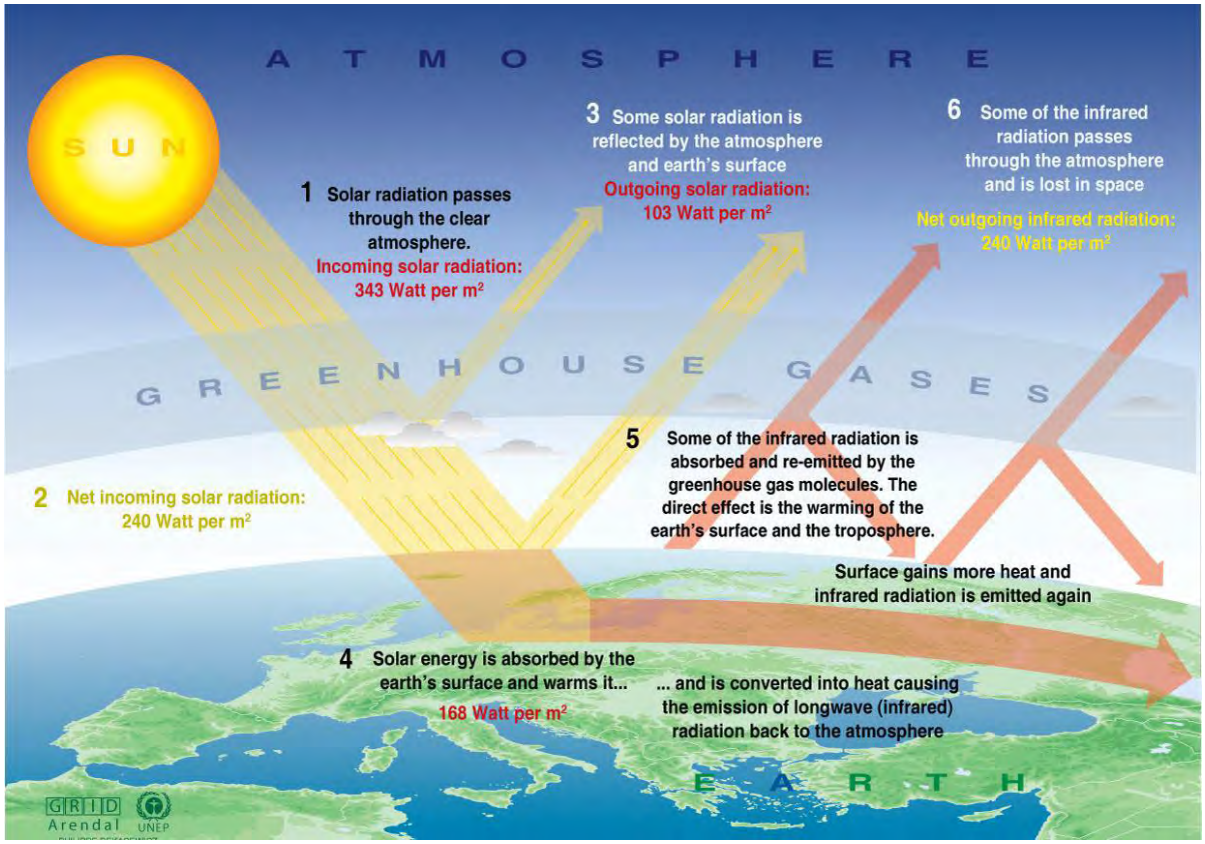
2 This includes all gains of incoming energy and all losses of outgoing energy; the planet is always striving to be in equilibrium.

3 Positive forcing tends to warm the surface while negative forcing tends to cool it.

4 This is the change in net irradiance at the tropopause after allowing stratospheric temperatures to readjust to radiative equilibrium, but with surface and tropospheric temperatures and state held fixed at the unperturbed values.

5 This condition results when the Earth has to work harder to maintain its radiation budget, because when more GHGs are present in the atmosphere, the Earth must force emissions of additional infrared radiation out into the atmosphere.

6 These basic conclusions have been endorsed by more than 45 scientific societies and academies of science, including all of the national academies of science of the major industrialized countries. Since 2007, no scientific body of national or international standing has maintained a dissenting opinion.



Source: Philippe Rekacewicz, UNEP/GRID-Arendal. Website: https://www.grida.no/resources/6467. Accessed May 15, 2022.

Figure 3.7-1: The Greenhouse Effect

Global warming affects global atmospheric circulation and temperatures; oceanic circulation and temperatures; wind and weather patterns; average sea level; ocean acidification; chemical reaction rates; precipitation rates, timing, and form; snowmelt timing and runoff flow; water supply; wildfire risks; and other phenomena, in a manner commonly referred to as *climate change*. Climate change is a change in the average weather of the Earth that is measured by alterations in wind patterns, storms, precipitation, and temperature. These changes are assessed using historical records of temperature changes occurring in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level of statistical significance specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude.

Temperature Predictions by the Intergovernmental Panel on Climate Change

The United Nations Intergovernmental Panel on Climate Change (IPCC) was established by the World Meteorological Organization and United Nations Environment Programme to assess scientific, technical, and socioeconomic information relevant to the understanding of climate change, its potential impacts, and options for adaptation and mitigation. The IPCC constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. In its Fourth Assessment Report, the IPCC predicted that the global mean temperature change from 1990 to 2100, given six scenarios, could range from 1.1°C (degrees Celsius) to 6.4°C. Regardless of

analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios.[7] The report also concluded that "[w]arming of the climate system is unequivocal," and that "[m]ost of the observed increase in global average temperatures since the mid-twentieth century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations." Warming of the climate system is now considered to be unequivocal,[8] with the global surface temperature increasing approximately 1.33°F (degrees Fahrenheit) over the last 100 years. The IPCC predicts increases in global average temperature of between 2°F and 11°F over the next 100 years, depending on the scenario.[9]

Greenhouse Gases and Global Emission Sources

Gases that trap heat in the atmosphere are referred to as GHGs. The effect is analogous to the way a greenhouse retains heat. Prominent GHGs that naturally occur in the Earth's atmosphere are water vapor, carbon dioxide (CO_2), methane (CH_4), oxides of nitrogen (NO_X), and ozone. Anthropogenic (human-caused) GHG emissions include releases of these GHGs plus release of human-made gases with high global warming potential (GWP) (ozone-depleting substances such as chlorofluorocarbons [CFCs][10] and aerosols, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). The GHGs listed by the IPCC (CO_2, methane, nitrous oxide, HFCs, PFCs, and sulfur hexafluoride) are discussed below, in order of abundance in the atmosphere. Water vapor, despite being the most abundant GHG, is not discussed below because natural concentrations and fluctuations far outweigh anthropogenic influences, making it impossible to predict. Ozone is not included because it does not directly affect radiative forcing. Ozone-depleting substances, which include chlorofluorocarbons, halons, carbon tetrachloride, methyl chloroform, and hydrochlorofluorocarbons, are not included because they have been primarily replaced by HFCs and PFCs.

The GWP is the potential of a gas or aerosol to trap heat in the atmosphere. The GWP of a gas is essentially a measurement of the radiative forcing of a GHG compared with the reference gas, carbon dioxide (CO_2).

Individual GHG compounds have varying potential for contributing to global warming. For example, methane is 25 times as potent as CO_2, while sulfur hexafluoride is 22,200 times more potent than CO_2 on a molecule-per-molecule basis. To simplify reporting and analysis, methods have been set forth to describe emissions of GHGs in terms of a single gas. The most commonly accepted method for comparing GHG emissions is the GWP methodology defined in the IPCC reference documents. The IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of carbon dioxide equivalents (CO_2e), which compares the gas in question to that of the same mass of CO_2 (by definition, CO_2 has a GWP of 1). The GWP of a GHG is a measure of how much a given mass of a GHG is estimated to contribute to global warming. Thus, to describe how much global warming a given type and amount of GHG may cause, the CO_2e is used. A CO_2e is the

[7] United Nations Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller [eds.]). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Website: www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html. Accessed April 19, 2022.

[8] Ibid.

[9] Ibid.

[10] CFCs destroy stratospheric ozone. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited CFCs production in 1987.

mass emissions of an individual GHG multiplied by its GWP. As such, a high GWP represents high absorption of infrared radiation and a long atmospheric lifetime compared to CO_2. One must also select a time horizon to convert GHG emissions to equivalent CO_2 emissions to account for chemical reactivity and lifetime differences among various GHG species. The standard time horizon for climate change analysis is 100 years. Generally, GHG emissions are quantified in terms of metric tons (MT) of CO_2e (MT CO_2e) emitted per year.

The atmospheric residence time of a gas is equal to the total atmospheric abundance of the gas divided by its rate of removal.[11] The atmospheric residence time of a gas is, in effect, a half-life measurement of the length of time a gas is expected to persist in the atmosphere when accounting for removal mechanisms such as chemical transformation and deposition.

Table 3.7-1 lists the GWP of each GHG and its lifetime. Units commonly used to describe the concentration of GHGs in the atmosphere are parts per million (ppm), parts per billion (ppb), and parts per trillion (ppt), referring to the number of molecules of the GHG in a sampling of 1 million, 1 billion, or 1 trillion molecules of air. Collectively, HFCs, PFCs, and sulfur hexafluoride are referred to as high-GWP gases. CO_2 is by far the largest component of worldwide CO_2e emissions, followed by methane, nitrous oxide, and high-GWP gases, in order of decreasing contribution to CO_2e.

The primary human processes that release GHGs include the burning of fossil fuels for transportation, heating, and electricity generation; agricultural practices that release methane, such as livestock grazing and crop residue decomposition; and industrial processes that release smaller amounts of high-GWP gases. Deforestation and land cover conversion have also been identified as contributing to global warming by reducing the Earth's capacity to remove CO_2 from the air and altering the Earth's albedo or surface reflectance, thus allowing more solar radiation to be absorbed. Specifically, CO_2 emissions associated with fossil fuel combustion are the primary contributors to human-induced climate change. CO_2, methane, and nitrous oxide emissions associated with human activities are the next largest contributors to climate change.

GHGs of California concern are defined by California AB 32 (see the Regulatory Environment subsection below for a description) and include CO_2, CH_4, NO_X, HFCs, PFCs, and SF_6. A seventh GHG, nitrogen trifluoride (NF_3), was also added under the California Health and Safety Code Section 38505(g)(7) as a GHG of concern. These GHGs are described in terms of their physical description and properties, GWP, atmospheric residence lifetime, sources, and atmospheric concentration in 2005 in Table 3.7-1.

Table 3.7-1: Description of Greenhouse Gases of California Concern

Greenhouse Gas	Physical Description and Properties	Global Warming Potential (100 years)	Atmospheric Residence Lifetime (years)	Sources
Carbon dioxide (CO_2)	Odorless, colorless, natural gas.	1	50-200	burning coal, oil, natural gas, and wood; decomposition of

[11] Seinfeld, J.H. and S.N. Pandis. 2006. Atmospheric Chemistry and Physics: From Air Pollution to Climate Change, 2nd Edition. New York. John Wiley & Sons.

Greenhouse Gas	Physical Description and Properties	Global Warming Potential (100 years)	Atmospheric Residence Lifetime (years)	Sources
				dead organic matter; respiration of bacteria, plants, animals, and fungus; oceanic evaporation; volcanic outgassing; cement production; land use changes.
Methane (CH_4)	Flammable gas and is the main component of natural gas.	28	12	geological deposits (natural gas fields) extraction; landfills; fermentation of manure; and decay of organic matter.
Nitrous oxide (N_2O)	Nitrous oxide (laughing gas) is a colorless GHG.	265	114	microbial processes in soil and water; fuel combustion; industrial processes.
Chloro-fluoro-carbons (CFCs)	Nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (level of air at the Earth's surface); formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms.	3,800-8,100	45-640	refrigerants aerosol propellants; cleaning solvents.
Hydro-fluoro-carbons (HFCs) 1,1-Difluorethane (HFC-152a)	Colorless and odorless gas which is used as a liquefied compressed gas. Synthetic human-made chemicals used as a substitute for CFCs and contain carbon, chlorine, and at least one hydrogen atom.	138 to 11,700	1-50,000	automobile air conditioners; refrigerants; cooling agent; aerosol propellant; and manufacture of other chemicals.
Per-fluoro-carbons (PFCs)	Stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface.	6,500 to 9,200	10,000-50,000	primary aluminum production; semiconductor manufacturing.
Sulfur hexafluoride (SF_6)	Human-made, inorganic, odorless, colorless, and nontoxic, nonflammable gas.	22,800	3,200	electrical power transmission equipment insulation;

Greenhouse Gas	Physical Description and Properties	Global Warming Potential (100 years)	Atmospheric Residence Lifetime (years)	Sources
				magnesium industry, semiconductor manufacturing; a tracer gas.
Nitrogen trifluoride (NF_3)	Inorganic, is used as a replacement for PFCs, and is a powerful oxidizing agent.	17,200	740	electronics manufacture for semiconductors and liquid crystal displays.

Sources:
United Nations Intergovernmental Panel on Climate Change (IPCC). 2013. Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, Website: https://www.ipcc.ch/report/ar5/wg1/. Accessed May 9, 2022.

United Nations Intergovernmental Panel on Climate Change (IPCC). 2014. Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (Core Writing Team, Pachauri, R.K. and Reisinger, A. [eds.]). IPCC, Geneva, Switzerland. Website: https://www.ipcc.ch/report/ar5/syr/. Accessed May 9, 2022.

The State has begun the process of addressing pollutants referred to as short-lived climate pollutants. Senate Bill (SB) 605, approved by the Governor on September 14, 2014, required the California Air Resources Board (ARB) to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants by January 1, 2016. The ARB released the Proposed Short-Lived Climate Pollutant Reduction Strategy in April 2016. The ARB has completed an emission inventory of these pollutants, identified research needs, identified existing and potential new control measures that offer co-benefits, and coordinated with other State agencies and districts to develop measures.

The short-lived climate pollutants include three main components: black carbon, fluorinated gases, and methane. Fluorinated gases and methane are described in Table 3.7-1 and are already included in the California GHG inventory. Black carbon has not been included in past GHG inventories; however, ARB will include it in its comprehensive strategy.[12]

Black carbon is a component of fine particulate matter (PM). Black carbon is formed by incomplete combustion of fossil fuels, biofuels, and biomass. Sources of black carbon within a jurisdiction may include exhaust from diesel trucks, vehicles, and equipment, as well as smoke from biogenic combustion. Biogenic combustion sources of black carbon include the burning of biofuels used for transportation, the burning of biomass for electricity generation and heating, prescribed burning of agricultural residue, and natural and unnatural wildfires. Black carbon is not a gas but an aerosol—particles or liquid droplets suspended in air. Black carbon only remains in the atmosphere for days to weeks, whereas other GHGs can remain in the atmosphere for years. Black carbon can be deposited on snow, where it absorbs sunlight, reduces sunlight reflectivity, and hastens snowmelt. Direct

[12] California Air Resources Board (ARB). 2015. Short-Lived Climate Pollutant Reduction Strategy, Concept Paper. May. Website: https://ww2.arb.ca.gov/resources/documents/slcp-strategy-draft-may2015. Accessed April 19, 2022.

effects include absorbing incoming and outgoing radiation; indirectly, black carbon can also affect cloud reflectivity, precipitation, and surface dimming (cooling).

Global warming potentials for black carbon were not defined by the IPCC in its Fourth Assessment Report. The ARB has identified a global warming potential of 3,200 using a 20-year time horizon and 900 using a 100-year time horizon from the IPCC Fifth Assessment. Sources of black carbon are already regulated by the ARB, and air district criteria pollutant and toxic regulations that control fine particulate emissions from diesel engines and other combustion sources.[13] Additional controls on the sources of black carbon specifically for their GHG impacts beyond those required for toxic and fine particulates are not likely to be needed.

Ozone is another short-lived climate pollutant that will be part of the strategy. Ozone affects evaporation rates, cloud formation, and precipitation levels. Ozone is not directly emitted, so its precursor emissions, volatile organic compounds (VOC) and oxides of nitrogen (NO_X) on a regional scale and CH_4 on a hemispheric scale will be subject of the strategy.[14]

Water vapor is also considered a GHG. Water vapor is an important component of our climate system and is not regulated. Increasing water vapor leads to warmer temperatures, which causes more water vapor to be absorbed into the air. Warming and water absorption increase in a spiraling cycle. Water vapor feedback can also amplify the warming effect of other GHGs, such that the warming brought about by increased carbon dioxide allows more water vapor to enter the atmosphere.[15]

Global Climate Change Issue

Climate change is a global problem because GHGs are global pollutants, unlike criteria air pollutants and hazardous air pollutants (also called toxic air contaminants), which are pollutants of regional and local concern. Pollutants with localized air quality effects have relatively short atmospheric lifetimes, approximately 1 day; by contrast, GHGs have long atmospheric lifetimes, several years to several thousand years. GHGs persist in the atmosphere for a long enough time to be dispersed around the globe.

Although the exact lifetime of any particular GHG molecule depends on multiple variables and cannot be pinpointed, more CO_2 is currently emitted into the atmosphere than is sequestered. CO_2 sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through photosynthesis and dissolution, respectively. These are two of the most common processes of CO_2 sequestration. Of the total annual human-caused CO_2 emissions, approximately 54 percent is sequestered through ocean uptake, Northern Hemisphere forest regrowth, and other terrestrial sinks within a year, whereas the remaining 46 percent of human-caused CO_2 emissions is stored in the atmosphere.[16]

[13] California Air Resources Board (ARB). 2015. Short-Lived Climate Pollutant Reduction Strategy, Concept Paper. May. Website: https://ww2.arb.ca.gov/resources/documents/slcp-strategy-draft-may2015. Accessed April 19, 2022.
[14] Ibid.
[15] National Aeronautics and Space Administration (NASA). 2015. NASA—Global Climate Change, Vital Signs of a Planet. Website: http://climate.nasa.gov/causes/. Accessed April 19, 2022.
[16] Seinfeld, J. H. and S.N. Pandis. 1998. Atmospheric Chemistry and Physics from Air Pollution to Climate Change. John Wiley & Sons.

Similarly, effects of GHGs are borne globally, as opposed to the localized air quality effects of criteria air pollutants and hazardous air pollutants. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known and cannot be quantified, and no single project would be expected to measurably contribute to a noticeable incremental change in the global average temperature, or to global or local climates or microclimate.

Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. A cumulative discussion and analysis of project impacts on global climate change is presented in this EIR because, although it is unlikely that a single project will contribute significantly to climate change, cumulative emissions from many projects affect global GHG concentrations and the climate system.

Global climate change has the potential to result in sea level rise (resulting in flooding of low-lying areas), to affect rainfall and snowfall (leading to changes in water supply), to affect temperatures and habitats (affecting biological resources and public health), and to result in many other adverse environmental consequences.

Although the international, national, state, and regional communities are beginning to address GHGs and the potential effects of climate change, worldwide GHG emissions will likely continue to rise over the next decades.

Climate and Topography

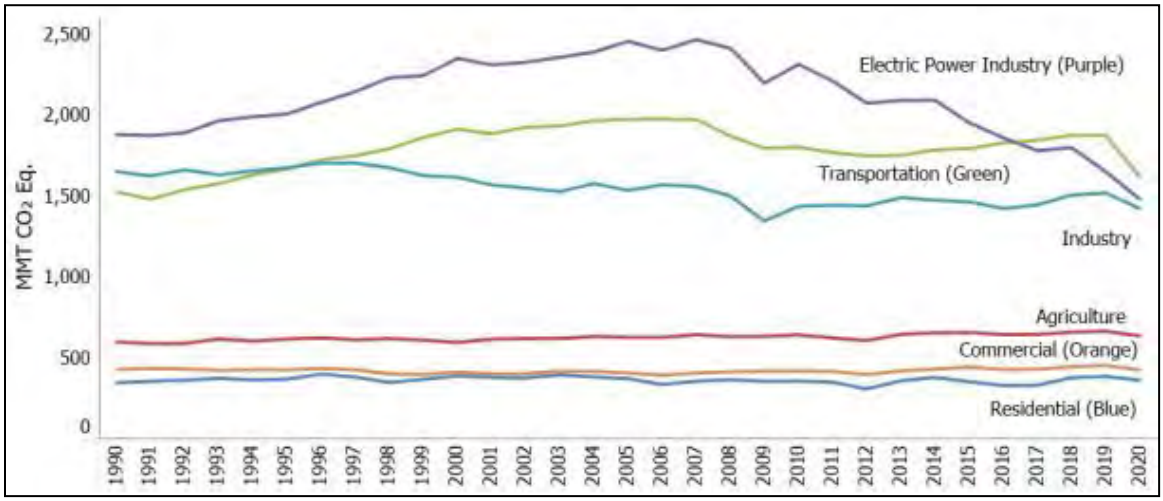
Climate is the accumulation of daily and seasonal weather events over a long period of time, whereas weather is defined as the condition of the atmosphere at any particular time and place. For a detailed discussion of existing regional and project site climate and topography, see Section 3.2, Air Quality.

Existing GHG Emissions

United States GHG Inventory

Total U.S. GHG emissions have decreased by 6.6 percent from 1990 to 2020.[17] Figure 3.7-2 presents the trend in U.S. GHG emissions by economic sector from 1990 to 2020. Total U.S. GHG emissions decreased by 10.6 percent from 2019 to 2020. The sharp decline in emissions from 2019 to 2020 is largely due to the impacts of the coronavirus (COVID-19) pandemic on travel and economic activity. Within the U.S., transportation was the largest emitter of CO_2 in 2020, accounting for 27.2 percent of emissions, followed by electric power generation, accounting for 24.8 percent, while emissions from industry accounting for 23.8 percent.

[17] United States Environmental Protection Agency (EPA). 2022. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020 – Executive Summary. Website: https://www.epa.gov/system/files/documents/2022-04/us-ghg-inventory-2022-chapter-executive-summary.pdf. Accessed May 9, 2022.



Note: Emissions and removals from Land Use, Land-Use Change, and Forestry are excluded.

Source: United States Environmental Protection Agency (EPA). 2022. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020. Website: https://www.epa.gov/system/files/documents/2022-04/us-ghg-inventory-2022-main-text.pdf. Accessed May 5, 2022.

Figure 3.7-2: U.S. Greenhouse Gas Emissions Allocated to Economic Sectors (1990-2020)

California GHG Inventory

As the second largest emitter of GHG emissions in the U.S., California contributes a large quantity (418.2 million metric tons [MMT] CO_2e in 2019) of GHG emissions to the atmosphere.[18,19] Human-related emissions of CO_2 are largely byproducts of fossil fuel combustion and are attributable to transportation, industry/manufacturing, electricity generation, natural gas consumption, and agriculture processes. In California, the transportation sector is the largest emitter at 41 percent of GHG emissions, followed by industrial at 24 percent of GHG emissions.[20]

Bay Area Air Quality Management District GHG Inventory

The BAAQMD prepared a GHG inventory for the San Francisco Bay Area (Bay Area), which provides an estimate of GHG emissions in the base year 2011 for all counties located in the jurisdiction of the BAAQMD: Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, Napa, and the southern portions of Solano and Sonoma.[21] This GHG inventory is based on the standards for criteria pollutant inventories and is intended to support BAAQMD's climate protection activities.

Table 3.7-2 shows the 2011 breakdown of emissions by sector/industry for each county within BAAQMD's jurisdiction. The estimated GHG emissions are presented in CO_2e, which weights each GHG by its GWP. The GWPs used in the BAAQMD inventory are from the Second Assessment Report of the IPCC.

[18] World Resources Institute (WRI). 2017. 8 Charts to Understand US State Greenhouse Gas Emissions. Website: https://www.wri.org/insights/8-charts-understand-us-state-greenhouse-gas-emissions. Accessed April 19, 2022.

[19] California Air Resources Board (ARB). 2021. Current California GHG Emission Inventory Data, 2000-2019 Trends Figure Data. Website: https://ww2.arb.ca.gov/ghg-inventory-data. Accessed April 19, 2022.

[20] California Air Resources Board (ARB). 2018. California Greenhouse Inventory—Graphs. Website: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf. Accessed April 19, 2022.

[21] Bay Area Air Quality Management District. (BAAQMD). 2015. Bay Area Emissions Inventory Summary Report: Greenhouse Gases-Base Year 2011. Accessed May 5, 2022.

In 2011, GHG emissions from the San Mateo County accounted for approximately 8.9 percent of the Bay Area's total GHG emissions. Transportation is the largest GHG emissions sector in the Bay Area, followed by industrial/commercial, electricity generation and cogeneration, and residential fuel usage. In San Mateo County, the transportation also generates the largest amount of GHG emissions, followed by the industrial/commercial sector.

Table 3.7-2: 2011 GHG Emissions by Sector and County (MMT CO_2e/Year)

Sector	Alameda	Contra Costa	Marin	Napa	San Francisco	San Mateo	Santa Clara	Solano	Sonoma
Industrial/Commercial	2.7	17.8	0.4	0.2	1.2	1.4	4.1	2.7	0.5
Residential Fuel	1.3	1.0	0.3	0.1	0.9	0.8	1.5	0.3	0.4
Electricity/Co-gen	0.9	7.2	0.1	0.1	0.5	0.4	2.2	0.4	0.2
Off-Road Equipment	0.2	0.2	0.0	0.0	0.2	0.1	0.4	0.0	0.1
Transportation	7.9	5.0	1.3	0.9	3.0	5.0	7.6	1.6	2.0
Agriculture/Farming	0.1	0.2	0.2	0.1	0.0	0.0	0.2	0.1	0.2
Total	**13.2**	**31.4**	**2.4**	**1.5**	**5.7**	**7.7**	**16.0**	**5.1**	**3.5**

Notes:
BAAQMD = Bay Area Air Quality Management District
CO_2e = carbon dioxide equivalent
co-gen = cogeneration
GHG = greenhouse gas
* Portion within BAAQMD jurisdiction
Source: Bay Area Air Quality Management District. (BAAQMD). 2015. Bay Area Emissions Inventory Summary Report: Greenhouse Gases-Base Year 2011. Website: https://www.baaqmd.gov/~/media/files/planning-and-research/emission-inventory/by2011_ghgsummary.pdf. January. Accessed May 5, 2022.

City of South San Francisco GHG Inventory

The 2017 City of South San Francisco GHG emissions inventory captures communitywide emissions generated from transportation, energy consumption in homes and buildings, solid waste, water, and off-road transportation (e.g., emissions from construction, landscaping equipment) within the City. It was developed using the ICELI Global Protocol for Community-Scale Greenhouse Gas Emission Inventories. Additionally, in order to be consistent with the City's 2014 CAP, 2005 emissions are used as a proxy for the estimated 1990 level of emissions.

Communitywide, the City of South San Francisco emitted 609,452 MT CO_2e in 2017, up 18 percent from the 2005 GHG emissions estimate of 517,757 MT CO_2e. Despite an 18 percent increase in overall emissions, annual per service population emissions only increased from 2005 to 2017 by 3 percent from 4.8 MT CO_2e in 2005 to 4.94 MT CO_2e in 2017. The service area population is a sum of the populations that live and/or work in the City (population and jobs). These numbers show that population, job growth, and a strong regional economy are the primary drivers of emission increases and that emissions reduction strategies in the 2014 CAP were not able to keep up with growth. The 2014 CAP set the 2020 target of a 15 percent decrease in emissions from the baseline year of 2005.

The City of South San Francisco has updated its original 2014 CAP to align with new State regulations and targets related to climate change (see Section 3.7.3, Regulatory Framework). Furthermore, the 2014 CAP set an emissions target for 2020 and this updated CAP extends the horizon year to 2040.

Climate Change Trends and Effects

CO_2 accounts for more than 75 percent of all anthropogenic GHG emissions, the atmospheric residence time of CO_2 is decades to centuries, and global atmospheric concentrations of CO_2 continue to increase at a faster rate than ever previously recorded. Thus, the warming impacts of CO_2 will persist for hundreds of years after mitigation is implemented to reduce GHG concentrations.

California

Substantially higher temperatures, more extreme wildfires, and rising sea levels are just some of the direct effects of climate change experienced in California.[22,23] As reported by the California Natural Resources Agency in 2009, despite annual variations in weather patterns, California has seen a trend of increased average temperatures, more extreme hot days, fewer cold nights, longer growing seasons, less winter snow, and earlier snowmelt and rainwater runoff. Statewide average temperatures increased by about 1.7°F from 1895 to 2011, and a larger proportion of total precipitation is falling as rain instead of snow.[24] Sea level rose by as much as 7 inches along the California coast over the last century, leading to increased erosion and adding pressure to the State's infrastructure, water supplies, and natural resources.

These observed trends in California's climate are projected to continue in the future. Research indicates that California will experience overall hotter and drier conditions with a continued reduction in winter snow (with concurrent increases in winter rains), as well as increased average temperatures and accelerating sea level rise. The frequency, intensity, and duration of extreme weather events such as heat waves, wildfires, droughts, and floods will also change.[25] In addition, increased air pollution and spread of insects potentially carrying infectious diseases will also occur as the climate-associated temperature and associated species clines shift in latitude.

In California, climate change may result in consequences such as the following.[26,27]

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[22] California Natural Resources Agency (CNRA). 2009. 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008. Website: http://resources.ca.gov/docs/climate/Statewide_Adaptation_Strategy.pdf. Accessed April 19, 2022.

[23] California Energy Commission (CEC). 2018. Statewide Summary Report. California's Climate Change Assessment. Publication number: SUM-CCCA4-2018-013.Website: https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf . Accessed May 26, 2022.

[24] California Energy Commission (CEC). 2006. Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004. Draft Final Report. CEC-600-2006-013-D. Website: http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-D.PDF. Accessed April 19, 2022.

[25] California Natural Resources Agency (CNRA). 2009. 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008. Website: https://resources.ca.gov/CNRALegacyFiles/docs/climate/Statewide_Adaptation_Strategy.pdf. Accessed April 19, 2022.

[26] California Climate Change Center. (CCCC). 2006. Our Changing Climate, Assessing the Risks to California: A Summary Report from the California Climate Change Center. July 2006. CEC-500-2006-077. Website: http://climate.calcommons.org/bib/our-changing-climate-assessing-risks-california-summary-report-california-climate-change-center Accessed April 19, 2022.

[27] Moser et al. 2009. Moser, Susie, Guido Franco, Sarah Pittiglio, Wendy Chou, Dan Cayan. 2009. The Future Is Now: An Update on Climate Change Science Impacts and Response Options for California. California Energy Commission, PIER Energy-Related Environmental Research Program. CEC-500-2008-071. Website: https://resources.ca.gov/CNRALegacyFiles/docs/climate/Statewide_Adaptation_Strategy.pdf Accessed April 19, 2022.

- **A reduction in the quality and supply of water from the Sierra snowpack.** If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.
- **Increased risk of large wildfires.** If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of Southern California are estimated to increase by approximately 30 percent toward the end of the 21st century because more winter rain will stimulate the growth of more plant "fuel" available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more Northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.
- **Reductions in the quality and quantity of certain agricultural products.** The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.
- **Exacerbation of air quality problems.** If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.
- **A rise in sea levels resulting in the displacement of coastal businesses and residences.** During the past century, sea levels along California's coast have risen about 7 inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.
- **An increase temperature and extreme weather events.** Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.

A decrease in the health and productivity of California's forests. Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.

Bay Area

The following is a summary of climate change factors and predicted trends specific to the Bay Area.

Temperature, Heat, Drought, and Wildfire Events

The Bay Area is expected to experience warming over the rest of the 21st century. Consistent with Statewide projections, the annual average temperature in the Bay Area will likely increase by 2.7°F between 2000 and 2050, based on GHGs that have already been emitted into the atmosphere. By the end of the century, the increase in the Bay Area's annual average temperature may range from approximately 3.5°F to 11°F relative to the average annual temperature simulated for the 1961–1990

baseline period used for the study, depending on the GHG emissions scenarios.[28] The projected rate of warming, especially in the latter half of the 21st century, is considerably greater than warming rates derived from historical observed data.

The annual average temperature in the Bay Area has been increasing over the last several decades. The Bay Area is expected to see an increase in average annual temperature of 2.7°F by 2050, and 3.5°F to 11°F by 2100. Projections show a greater warming trend during the summer season. The coastal parts of the Bay Area will experience the most moderate warming trends.[29] Extreme heat events are expected to increase in duration, frequency, and severity by 2050. Extreme freeze events are expected to decrease in frequency and severity by 2100, but occasional colder-than-historical events may occur by 2050.[30]

Precipitation, Rainfall, and Flooding Events

Studies of the effect of climate change on the long-term average precipitation for California show some variance.[31] Considerable variability exists across individual models and examining the average changes can mask more extreme scenarios that project much wetter or drier conditions. California is expected to maintain a Mediterranean climate through the next century, with dry summers and wet winters that vary between seasons, years, and decades. Wetter winters and drier springs are also expected, but overall annual precipitation is not projected to change substantially. By midcentury, more precipitation is projected to occur in winter in the form of less frequent but larger events. The majority of global climate models predict drying trends across the State by 2100.[32]

- The Bay Area has not experienced substantial changes in rainfall depth or intensities over the past 30 years. The Bay Area will continue to experience a Mediterranean climate, with little change in annual precipitation projected by 2050, although a high degree of variability may persist. An annual drying trend is projected to occur by 2100. The greatest decline in precipitation is expected to occur during the spring months, while minimal change is expected during the winter months. Increases in drought duration and frequency coupled with higher temperatures, as experienced in 2012, 2013, and 2014, will increase the likelihood of wildfires.
- California is expected to see increases in the magnitude of extreme events, including increased precipitation delivered from atmospheric river events, which would bring high levels of rainfall during short time periods and increase the chance of flash floods. The Bay Area is also expected to see an increase in precipitation intensities, but possibly through less frequent events.[33]

[28] California Climate Change Center (CCCC). 2009. Climate Change Scenarios and Sea Level Rise Estimates for the California 2009. Website:https://www.researchgate.net/publication/231181370_Climate_change_scenarios_and_sea_level_rise_estimates_for_the_California_2009_climate_change_scenarios_assessment. Accessed April 19, 2022.
[29] Cal-Adapt. 2021. Climate Tools. Website: http://cal-adapt.org/tools/. Accessed April 19, 2022.
[30] Ibid.
[31] California Climate Change Center (CCCC). 2009. Climate Change Scenarios and Sea Level Rise Estimates for the California 2009 Climate Change Scenarios Assessment. CEC-500-2009-014-F. Website: https://www.researchgate.net/publication/231181370_Climate_change_scenarios_and_sea_level_rise_estimates_for_the_California_2009_climate_change_scenarios_assessment. Accessed April 19, 2022.
[32] California Natural Resources Agency (CNRA). 2009. 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008.
[33] California Climate Change Center (CCCC) 2009. Climate Change Scenarios and Sea Level Rise Estimates for the California 2009 Climate Change Scenarios Assessment. CEC-500-2009-014-F. August.

Reduced Sierra Nevada Snowpack and Water Supply Shortages

If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate surface water supplies.

Vectors and Disease Events

Climate change will likely increase vector insect populations and, in turn, may increase the risk of some infectious diseases, particularly those diseases that appear in warm areas, such as malaria, dengue fever, yellow fever, and encephalitis.

Air Quality and Pollution Events

Warming-induced increases in the frequency of smog (ground-level ozone) events and particulate air pollution will exacerbate respiratory disorders.[34] Although there could be health effects resulting from changes in the climate and the consequences that can occur, inhalation of GHGs at levels currently in the atmosphere would not result in adverse health effects, with the exception of ozone and aerosols (particulate matter). The potential health effects of ozone and particulate matter are discussed in criteria pollutant analyses. At very high indoor concentrations (not at levels existing outside), carbon dioxide, methane, SF_6, and some chlorofluorocarbons can cause suffocation as the gases can displace oxygen.[35,36]

City of South San Francisco

With climate change, it is anticipated that extreme heat events in South San Francisco will become more frequent. Historically, from 1960-1990, the City averaged four extreme heat days per year. Even under lower predictions, the City is expected to experience an average of nine extreme heat days per year by midcentury, and 24 extreme heat days by the end of the century.[37] Additionally, it is anticipated that climate change will intensify variability in precipitation from year to year, with the City experiencing more very dry years and very wet years, potentially causing greater flood risk as well as greater drought risk.

In the last 100 years, sea level in the nine county Bay Area has risen over 8 inches.[38] San Mateo County recently released a vulnerability assessment that projected a mid-level end of century scenario with about 77 inches of sea level rise.[39] The City is already seeing annual impacts of sea level rise with 1-foot King tides[40] in Oyster Point.[41]

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[34] United States Environmental Protection Agency (EPA) 2009. Ozone and your Health. EPA-456/F-09-001. February.

[35] National Institute for Occupational Safety and Health (NIOSH) 2018. Carbon Dioxide. November 29. Website: www.cdc.gov/niosh/npg/npgd0103.html. Accessed April 19, 2022.

[36] Occupational Safety and Health Administration (OSHA) 2003. United States Department of Labor. Safety and Health Topics: Methane. Website: www.osha.gov/dts/chemicalsampling/data/CH_250700.html. Accessed April 19, 2022.

[37] City of South San Francisco. 2019. South San Francisco General Plan Update Climate Hazards Existing Conditions Report. Website: https://shapessf.com/wp-content/uploads/2019/11/SSF_ECR_Ch11_ClimateChange_final.pdf. Accessed May 13, 2022.

[38] Governor's Office of Planning and Research (OPR). 2018. California Fourth Climate Change Assessment: San Francisco Bay Area Region Report. Website: https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-005_SanFranciscoBayArea_ADA.pdf. Accessed April 19, 2022.

[39] Sea Change San Mateo County. 2018. Sea Level Rise Vulnerability Assessment. Website: https://seachangesmc.org/vulnerability-assessment/. Accessed April 19, 2022.

[40] The King tide is the highest predicted high tide of the year at a coastal location. It is above the highest water level reached at high tide on an average day. King tides are also known as perigean spring tides. Website: www.epa.gov/cre/king-tides-and-climate-change.

[41] City of South San Francisco. 2019. South San Francisco General Plan Update Climate Hazards Existing Conditions Report. Website: https://shapessf.com/wp-content/uploads/2019/11/SSF_ECR_Ch11_ClimateChange_final.pdf. Accessed May 13, 2022.

3.7.3 - Regulatory Framework

International

United Nations Climate Change Framework Convention

On March 21, 1994, the U.S. joined a number of countries around the world in signing the United Nations Climate Change Framework Convention. Under the Convention, governments agreed to gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

Western Climate Initiative (Western North America Cap-and-Trade Program)

Cap-and-trade refers to a policy tool where emissions are limited to a certain amount and can be traded or provides flexibility on how the emitter can comply. Each emitter limits CO_2 emissions from power plants, auctions CO_2 emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Western Climate Initiative partner jurisdictions developed a comprehensive initiative to reduce North America GHG emissions to 15 percent below 2005 levels by 2020. The partners are California, British Columbia, Manitoba, Ontario, and Québec. Currently only California and Québec are participating in the Cap-and-Trade Program.[42]

Kyoto Protocol

The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change (UNFCCC). The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at average of 5 percent against 1990 levels over the 5-year period from 2008 to 2012. The Protocol encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, former President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended U.S. involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2°C above preindustrial levels, subject to a review in 2015. The Climate Change Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings are gradually gaining consensus among participants on individual climate change issues.

[42] Center for Climate and Energy Solutions (C^2ES). 2015. Multi-State Climate Initiatives. Website: http://www.c2es.org/us-states-regions/regional-climate-initiatives. Accessed April 19, 2022.

On September 23, 2014, more than 100 heads of state and government, and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the United Nations. At the Summit, heads of government, business, and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Paris Climate Change Agreement

Parties to the UNFCCC reached a landmark agreement on December 12, 2015, in Paris, charting a fundamentally new course in the 2-decade-old global climate effort. Culminating a 4-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st Session of the UNFCCC Conference of the Parties, or "COP 21." Together, the Paris Agreement and the accompanying COP 21 decision:

- Reaffirm the goal of limiting global temperature increase well below 2 degrees Celsius, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every 5 years, with the clear expectation that they will "represent a progression" beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly will not "involve or provide a basis for any liability or compensation;"
- Require parties engaging in international emissions trading to avoid "double counting;" and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC.[43]

[43] Center for Climate and Energy Solutions (C^2ES). 2015. Outcomes of the U.N. Climate Change Conference. Website: http://www.c2es.org/international/negotiations/cop21-paris/summary. Accessed April 19, 2022.

On June 1, 2017, former President Trump announced the decision for the U.S. to withdraw from the Paris Climate Accord.[44] California remains committed to combating climate change through programs aimed to reduce GHGs.[45] On January 20, 2021, President Biden signed an Executive Order for the U.S. to rejoin the Paris Climate Accords.

Federal

Massachusetts et al. v. EPA (U.S. Supreme Court GHG Endangerment Ruling)

Massachusetts et al. v. EPA (Supreme Court Case 05-1120) was argued before the U.S. Supreme Court on November 29, 2006, in which it was petitioned that the United States Environmental Protection Agency (EPA) regulate four GHGs, including CO_2, under Section 202(a)(1) of the Clean Air Act (CAA). A decision was made on April 2, 2007, in which the Supreme Court found that GHGs are air pollutants covered by the CAA. The Court held that the Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed 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; and

Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed under “Clean Vehicles” below. After a lengthy legal challenge, the U.S. Supreme Court declined to review an Appeals Court ruling, which upheld the previous findings.

U.S. Consolidated Appropriations Act (Mandatory GHG Reporting)

The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 MT or more per year of GHG emissions are required to submit annual reports to the

[44] The White House. Statement by President Trump on the Paris Climate Accord. Website: https://it.usembassy.gov/statement-president-trump-paris-climate-accord/. April 19, 2022.

[45] California Air Resources Board (ARB). 2017. New Release: California and China Team Up to Push for Millions More Zero-emission Vehicles. Website: https://ww2.arb.ca.gov/news/california-and-china-team-push-millions-more-zero-emission-vehicles. Accessed April 19, 2022.

EPA. The first annual reports for the largest emitting facilities, covering calendar year 2010, were submitted to EPA in 2011.

U.S. Clean Air Act Permitting Programs (New GHG Source Review)

The EPA issued a final rule on May 13, 2010, that establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these CAA permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the federal code of regulations, the EPA states:

> This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the Clean Air Act, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to greenhouse gas sources, starting with the largest greenhouse gas emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources, but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for greenhouse gas emissions until at least April 30, 2016.

The EPA estimates that facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

Energy Independence and Security Act

The Energy Policy Act of 2005 created the Renewable Fuel Standard program. The Energy Independence and Security Act of 2007 expanded this program by:

- Expanding the Renewable Fuel Standard program to include diesel in addition to gasoline;
- Increasing the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;
- Establishing new categories of renewable fuel, and setting separate volume requirements for each one; and
- Requiring EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

This expanded Renewable Fuel Standard program lays the foundation for achieving substantial reductions of GHG emissions from the use of renewable fuels, reducing the use of imported petroleum, and encouraging the development and expansion of the nation's renewable fuels sector.

Signed on December 19, 2007, by the former President George W. Bush, the Energy Independence and Security Act of 2007 (EISA) aims to:

- Move the United States toward greater energy independence and security.
- Increase the production of clean renewable fuels.
- Protect consumers.
- Increase the efficiency of products, buildings, and vehicles.
- Promote research on and deploy GHG capture and storage options.
- Improve the energy performance of the federal government.
- Increase U.S. energy security, develop renewable fuel production, and improve vehicle fuel economy.

EISA reinforces the energy reduction goals for federal agencies put forth in Executive Order 13423, as well as introduces more aggressive requirements. The three key provisions enacted are the Corporate Average Fuel Economy Standards, the Renewable Fuel Standard, and the appliance/lighting efficiency standards.

The EPA is committed to developing, implementing, and revising both regulations and voluntary programs under the following subtitles in EISA, among others:

- Increased Corporate Average Fuel Economy Standards
- Federal Vehicle Fleets
- Renewable Fuel Standard
- Biofuels Infrastructure
- Carbon Capture and Sequestration[46]

The EPA and National Highway Traffic Safety Administration Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards Final Rule

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light-duty trucks. The law has become more stringent over time. On May 19, 2009, former President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an

[46] United States Environment Protection Agency (EPA). Summary of the Energy Independence and Security Act. Website: https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act. Accessed April 19, 2022.

estimated 960 MMT and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

The EPA and the NHTSA issued final rules on a second phase joint rulemaking, establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012.[47] The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles. The final standards are projected to result in an average industry fleet wide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 miles per gallon if achieved exclusively through fuel economy improvements.

The EPA and NHTSA issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks and buses on September 15, 2011, which became effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that began in the 2014 model year and achieve up to a 20 percent reduction in CO_2 emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles, and a 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10 percent reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

The State of California has received a waiver from the EPA to have separate, stricter Corporate Average Fuel Economy Standards.

State

California Assembly Bill 1493: Pavley Regulations and Fuel Efficiency Standards

California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011.[48]

The standards are to be phased in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards will result in an approximately 22 percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards will result in about a 30 percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed

[47] United States Environmental Protection Agency (EPA). 2012. EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks. EPA-420-F-12-051. August.

[48] California Air Resources Board (ARB). 2013. Clean Car Standards—Pavley, Assembly Bill 1493. Website: https://www.gsweventcenter.com/GSW_RTC_References/2015_0915_CleanAirStandards_Pavley.pdf. Accessed April 19, 2022.

transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.[49]

The second phase of the implementation for the Pavley Bill was incorporated into Amendments to the Low Emission Vehicle (LEV) Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will reduce pollutants from gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles and hydrogen fuel cell cars. The regulations will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.[50]

California Senate Bill 100: Renewable Portfolio Standard Program

On September 10, 2018, Governor Newsom signed SB 100, requiring California electricity utility providers to supply all in-state end-users with electricity sourced from renewable sources. Specifically, SB 100 accelerates the goals expressed under SB 1078 and requires that the program achieve 50 percent of electricity sourced from renewables by December 31, 2026, 60 percent by December 31, 2030, and 100 percent of electricity sourced from carbon-free sources by December 31, 2045. For clarification, renewable sources, as described herein, includes all renewable sources (e.g., solar, small hydro, wind) but notably omits large-scale hydroelectric and nuclear electricity generation; carbon-free sources include all renewable sources as well as large-scale hydroelectric and nuclear electricity generation.

California Executive Order S-3-05 (GHG Emissions Reduction Targets)

Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

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

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an Executive Order, the goals are not legally enforceable for local governments or the private sector.

California Assembly Bill 32: Global Warming Solutions Act and Scoping Plan

The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. “Greenhouse gases” as defined under AB 32 include CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. The

[49] California Air Resources Board (ARB). 2011. Facts About the Advanced Clean Cars Program. November 9.
[50] California Air Resources Board (ARB). 2011. Status of Scoping Plan Recommended Measures.

ARB is the State agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

> Global warming poses a serious threat to the economic wellbeing, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the State from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The ARB approved the 1990 GHG emissions level of 427 MMT CO_2e on December 6, 2007.[51] Therefore, to meet the State's target, emissions generated in California in 2020 are required to be equal to or less than 427 MMT CO_2e. Emissions in 2020 in a Business as Usual (BAU) scenario were estimated to be 596 MMT CO_2e, which do not account for reductions from AB 32 regulations.[52] At that rate, a 28 percent reduction was required to achieve the 427 MMT CO_2e 1990 inventory. In October 2010, the ARB prepared an updated 2020 forecast to account for the effects of the 2008 recession and slower forecasted growth. The 2020 inventory without the benefits of adopted regulation is now estimated at 545 MMT CO_2e. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels.[53]

The State has made steady progress in implementing AB 32 and achieving targets included in Executive Order S-3-05. The progress is shown in updated emission inventories prepared by ARB for 2000 through 2012 to show progress achieved to date.[54] The State has also achieved the Executive Order S-3-05 target for 2010 of reducing GHG emissions to 2000 levels. As shown below, the 2010 emission inventory achieved this target. Also shown are the average reductions needed from all Statewide sources (including all existing sources) to reduce GHG emissions back to 1990 levels.

- **1990:** 427 MMT CO_2e (AB 32 2020 Target)
- **2000:** 463 MMT CO_2e (an average 8 percent reduction needed to achieve 1990 base)
- **2010:** 450 MMT CO_2e (an average 5 percent reduction needed to achieve 1990 base)
- **2020:** 545 MMT CO_2e BAU (an average 21.7 percent reduction from BAU needed to achieve 1990 base)

The ARB Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32.[55] The Scoping Plan identifies

[51] California Air Resources Board (ARB). 2007. Staff Report. California 1990 Greenhouse Gas Level and 2020 Emissions Limit. November 16, 2007. Website: www.arb.ca.gov/cc/inventory/pubs/reports/staff_report_1990_level.pdf. Accessed April 19, 2022.

[52] California Air Resources Board (ARB). 2008. (includes edits made in 2009) Climate Change Scoping Plan, a framework for change. Website: http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed April 19, 2022.

[53] California Air Resources Board (ARB). 2014. GHG 2020 Business-as-Usual Emissions Projection. Website: https://ww2.arb.ca.gov/ghg-bau. Accessed April 19, 2022.

[54] California Air Resources Board (ARB). 2014. California Greenhouse Gas Emissions for 2000 to 2012—Trends of Emissions and Other Indicators. Website: http://www.arb.ca.gov/cc/inventory/pubs/reports/ghg_inventory_00-12_report.pdf. Accessed April 19, 2022.

[55] California Air Resources Board (ARB). 2008. (includes edits made in 2009) Climate Change Scoping Plan, a framework for change. Website: http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed April 19, 2022.

recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a Statewide renewables energy mix of 33 percent;
- Developing a California Cap-and-Trade Program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. Capped strategies are subject to the proposed Cap-and-Trade Program. The Scoping Plan states that the inclusion of these emissions within the cap-and trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. Uncapped strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional GHG emission reductions.[56]

The ARB approved the First Update to the Scoping Plan (Update) on May 22, 2014. The Update identifies the next steps for California's climate change strategy. The Update shows how California continues on its path to meet the near-term 2020 GHG limit, but also sets a path toward long-term, deep GHG emission reductions. The report establishes a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050, consistent with the long-term reduction target established by Executive Order S-3-05. The Update identifies progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and strategies for the next several years. The Update does not set new targets for the State but describes a path that would achieve the long term 2050 goal of Executive Order S-05-03 for emissions to decline to 80 percent below 1990 levels by 2050.

[56] California Air Resources Board (ARB). 2008. (includes edits made in 2009) Climate Change Scoping Plan, a framework for change. Website: http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed April 19, 2022.

AB 32 does not give the ARB a legislative mandate to set a target beyond the 2020 target or to adopt additional regulations to achieve a post-2020 target. The Update estimates that reductions averaging 5.2 percent per year would be required after 2020 to achieve the 2050 goal.[57]

The Cap-and-Trade Program is a key element of the Scoping Plan. It sets a Statewide limit on sources responsible for 85 percent of California's GHG emissions and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program is designed to provide covered entities the flexibility to seek out and implement the lowest cost options to reduce emissions. The program conducted its first auction in November 2012. Compliance obligations began for power plants and large industrial sources in January 2013. Other significant milestones include linkage to Québec's cap-and-trade system in January 2014 and starting the compliance obligation for distributors of transportation fuels, natural gas, and other fuels in January 2015.[58]

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 Statewide emission limit will not be exceeded. An inherent feature of the Cap-and-Trade Program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by the ARB in the First Update:

> The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative.[59]

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. Thus, the Cap-and-Trade Program assures that California will meet its 2020 GHG emissions reduction mandate:

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[57] California Air Resources Board (ARB). 2014. First Update to the Climate Change Scoping Plan. Website: https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf. Accessed April 19, 2022.

[58] California Air Resources Board (ARB). 2015. ARB Emissions Trading Program. Website: http://www.arb.ca.gov/cc/capandtrade/guidance/cap_trade_overview.pdf. Accessed April 19, 2022.

[59] California Air Resources Board (ARB). 2014. First Update to the Climate Change Scoping Plan. Website: https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf. Accessed April 19, 2022.

> The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the "capped sectors." Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap. The Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site specific or project-level, GHG emissions reductions. Also, due to the regulatory architecture adopted by ARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the State's emissions forecasts and the effectiveness of direct regulatory measures.[60]

California Senate Bill 375: Sustainable Communities and Climate Protection Act

SB 375 was signed into law on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Concerning CEQA, SB 375, as codified in Public Resources Code Sections 21155 and 21159.28, states that CEQA findings determinations for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network if the project:

1. Is in an area with an approved Sustainable Communities Strategy or an alternative planning strategy that the ARB accepts as achieving the GHG emission reduction targets;
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies); and
3. Incorporates the mitigation measures required by an applicable prior environmental document.

[60] California Air Resources Board (ARB). 2014. First Update to the Climate Change Scoping Plan. Website: https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf. Accessed April 19, 2022.

California Senate Bill 1368: Emission Performance Standards

In 2006, the State Legislature adopted SB 1368, which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Because of the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly, the new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a maximum intensity factor for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 lbs CO_2 per megawatt-hour (MWh).

California Executive Order S-01-07: Low Carbon Fuel Standard

Former California Governor Arnold Schwarzenegger signed Executive Order S-01-07 on January 18, 2007. The order mandates that a Statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the Executive Order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "lifecycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by California Energy Commission on December 24, 2007) and was submitted to the ARB for consideration as an "early action" item under AB 32. The ARB adopted the LCFS on April 23, 2009.

The LCFS was subject to legal challenge in 2011. Ultimately, on August 8, 2013, the Fifth District Court of Appeal (California) ruled that ARB failed to comply with CEQA and the Administrative Procedure Act when adopting regulations for Low Carbon Fuel Standards. In a partially published opinion, the Court of Appeal directed that Resolution 09-31 and two executive orders of ARB approving LCFS regulations promulgated to reduce GHG emissions be set aside. However, the Court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while ARB complies with the procedural requirements it failed to satisfy.

To address the Court ruling, ARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. The second public hearing for the new LCFS regulation was held on September 24, 2015, and September 25, 2015, where the LCFS regulation was adopted. The Final Rulemaking Package adopting the regulation was filed with

the Office of Administrative Law (OAL) on October 2, 2015. The OAL approved the regulation on November 16, 2015.[61]

California Executive Order N-79-20

On September 23, 2020, Governor Gavin Newsom issued Executive Order N-79-20 establishing a goal that 100 percent of new passenger cars and trucks sold in California shall be zero-emission by 2035. The Executive Order also sets a goal that, where feasible, all operations include zero-emission medium- and heavy-duty trucks by 2045, and drayage trucks by 2035. Off-road vehicles have a goal to transition to 100 percent zero-emission vehicles by 2035, where feasible. While in-state sales of electric vehicles will increase through 2045, the State does not currently have legislation which will restrict or preclude the use of fossil-fueled vehicles by or after 2045.

California Executive Order S-13-08

Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy was adopted, which is the ". . . first Statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

California Senate Bill 350: Clean Energy and Pollution Reduction Act

In 2015, the State Legislature approved, and the Governor signed, SB 350 that reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the Renewables Portfolio Standard (RPS), higher energy efficiency requirements for buildings, initial strategies toward a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Provisions for a 50 percent reduction in the use of petroleum Statewide were removed from the Bill due to opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce Statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 25 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission, the California Energy Commission, and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.[62]

[61] California Air Resources Board (ARB). 2015. Low Carbon Fuel Standard Regulation. Website: http://www.arb.ca.gov/regact/2015/lcfs2015/lcfs2015.htm. Accessed April 19, 2022.

[62] California Legislative Information (California Leginfo). 2015. Senate Bill 350 Clean Energy and Pollution Reduction Act of 2015. Website: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350. Accessed April 19, 2022.

California Executive Order B-30-15

On April 29, 2015, an Executive Order was issued by the Governor to establish a California GHG emissions reduction target of 40 percent below 1990 levels by 2030. The Governor's Executive Order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The Executive Order sets a new interim Statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050 and directs the ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of MMT CO_2e. The Executive Order also requires the State's climate adaptation plan to be updated every 3 years and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this Executive Order is not legally enforceable against local governments and the private sector. Legislation that would update AB 32 to make post 2020 targets and requirements a mandate is in process in the State Legislature.

California Executive Order B-55-18 (GHG Emissions Reduction Targets)

On September 10, 2018, former California Governor Jerry Brown issued Executive Order B-55-18, which established the following GHG emissions reduction target:

By 2045, California shall achieve carbon net neutrality.

Executive Order B-55-18 identifies that new Statewide goal is to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net neutrality emissions thereafter. This emissions goal is in addition to the existing targets established by Executive Orders S-3-05 and B-30-15 and SB 32. This Executive Order also directs the ARB to work with other State agencies to identify and recommend measures to achieve this goal.

California Air Resources Board's Truck and Bus Regulation

The latest amendments to the Truck and Bus Regulation became effective on December 31, 2014. The amended regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet PM filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses registered in California will need to have 2010 or newer model year engines.

The regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds. The regulation provides a variety of flexibility options tailored to fleets operating low use vehicles, fleets operating in selected vocations like agricultural and construction, and small fleets of three or fewer trucks.[63]

[63] California Air Resources Board (ARB). 2015. On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation. Website: http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm. Accessed April 19, 2022.

California Senate Bill 32

Former California Governor Edmund Gerald Brown, Jr. signed SB 32 in September of 2016, giving ARB the statutory responsibility to include the 2030 target previously contained in Executive Order B-30-15 in the 2017 Scoping Plan Update. SB 32 states, "In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by this division, the state [air resources] board shall ensure that Statewide greenhouse gas emissions are reduced to at least 40 percent below the Statewide greenhouse gas emissions limit no later than December 31, 2030." The 2017 Climate Change Scoping Plan Update addressing the SB 32 targets was adopted on December 14, 2017. The major elements of the framework proposed to achieve the 2030 target are as follows:

1. SB 350
   - Achieve 50 percent Renewables Portfolio Standard by 2030.
   - Doubling of energy efficiency savings by 2030.
2. Low Carbon Fuel Standard
   - Increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).
3. Mobile Source Strategy (Cleaner Technology and Fuels Scenario)
   - Maintaining existing GHG standards for light- and heavy-duty vehicles.
   - Put 4.2 million Zero-Emission Vehicles (ZEVs) on the roads.
   - Increase ZEV buses, delivery and other trucks.
4. Sustainable Freight Action Plan
   - Improve freight system efficiency.
   - Maximize use of near zero-emission vehicles and equipment powered by renewable energy.
   - Deploy over 100,000 zero-emission trucks and equipment by 2030.
5. Short-Lived Climate Pollutant Reduction Strategy
   - Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030.
   - Reduce emissions of black carbon 50 percent below 2013 levels by 2030.
6. SB 375 Sustainable Communities Strategies
   - Increased stringency of 2035 targets.
7. Post-2020 Cap-and-Trade Program
   - Declining caps, continued linkage with Québec, and linkage to Ontario, Canada.
   - The ARB will look for opportunities to strengthen the program to support more air quality co-benefits, including specific program design elements. In Fall 2016, the ARB staff described potential future amendments including reducing the offset usage limit, redesigning the allocation strategy to reduce free allocation to support increased technology and energy investment at covered entities and reducing allocation if the covered entity increases criteria or toxics emissions over some baseline.
8. 20 percent reduction in GHG emissions from the refinery sector.

9. By 2018, develop Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

California Code of Regulations Title 24: Energy Efficiency Standards

Part 6 (Energy Efficiency Standards for Residential and Nonresidential Buildings)

California Code of Regulations Title 24 Part 6 (California's Energy Efficiency Standards for Residential and Nonresidential Buildings) was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2019 Building Energy Efficiency Standards went into effect on January 1, 2020.

California Code of Regulations Title 24: California Green Building Standards Code

California Code of Regulations Title 24, Part 11, is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect January 1, 2011. The code is updated on a regular basis, with the most recent update consisting of the 2019 California Green Building Standards Code (CALGreen) that became effective January 1, 2020. Local jurisdictions are permitted to adopt more stringent requirements, as State law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction ordinances, and defers to them as the ruling guidance provided they provide a minimum 50 percent diversion requirement. The Code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet to be certified for occupancy, which is generally enforced by the local building official.

CALGreen (California Code of Regulations [CCR] Title 24, Part 11) requires:

Short-term bicycle parking. If a commercial project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack (5.106.4.1.1).

Long-term bicycle parking. For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of tenant-occupied motorized vehicle parking capacity, with a minimum of one space (5.106.4.1.2).

Designated parking. Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).

Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of nonhazardous materials for recycling (5.410.1).

Construction waste. A minimum 65 percent diversion of construction and demolition waste from landfills. (5.408.1, A5.408.3.1 [nonresidential], A5.408.3.1 [residential]). All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled (5.408.3).

Wastewater reduction. Each building shall reduce the generation of wastewater by one of the following methods:

1. The installation of water-conserving fixtures or
2. Using nonpotable water systems (5.303.4).

Water use savings. 20 percent mandatory reduction in indoor water use with voluntary goal standards for 30, 35, and 40 percent reductions (5.303.2, A5303.2.3 [nonresidential]).

Water meters. Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day (5.303.1).

Irrigation efficiency. Moisture-sensing irrigation systems for larger landscaped areas (5.304.3).

Materials pollution control. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring and particleboard (5.404).

Building commissioning. Mandatory inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies (5.410.2).

California Senate Bill 97 and the CEQA Guidelines Update

Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The Code states "(a) On or before July 1, 2009, the Office of Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research pursuant to subdivision (a)."

The 2010 CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change. Section 15064.4(b) of the CEQA Guidelines provides direction for lead agencies for assessing the significance of impacts of GHG emissions:

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

- The extent to which the project complies with regulations or requirements adopted to implement a Statewide, regional, or local plan for the reduction or mitigation of GHG emissions (e.g., 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 GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

The CEQA Guidelines amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. Instead, they call for a "good-faith effort, based on available information, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project." The amendments encourage lead agencies to consider many factors in performing a CEQA analysis and preserve lead agencies' discretion to make their own determinations based upon substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses.

Also amended were CEQA Guidelines Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts, respectively. GHG mitigation measures are referenced in general terms, but no specific measures are championed. The revision to the cumulative impact discussion requirement (Section 15130) simply directs agencies to analyze GHG emissions in an EIR when a project's incremental contribution of emissions may be cumulatively considerable; however, it does not answer the question of when emissions are cumulatively considerable.

CEQA Guidelines Section 15183.5

CEQA Guidelines Section 15183.5 permits the preparation of a programmatic GHG analysis to be utilized for later project-specific tiering, as well as the preparation of Greenhouse Gas Reduction Strategy. Compliance with such plans can support a determination that a project's cumulative effect is not cumulatively considerable, according to Section 15183.5(b).

CEQA Guidelines Section 15183.5(b) allows projects and plans to be analyzed through a tiered approach utilizing an adopted Greenhouse Gas Reduction Strategy, often labeled as a Climate Action Plan. An adopted Greenhouse Gas Reduction Strategy is considered "qualified," it means that Strategy—or Climate Action Plan—may be utilized for this specific tiering purpose. If an adopted Climate Action Plan is not considered "qualified," it means it did not meet the requirements established under CEQA Guidelines Section 15183.5(b) and is not eligible to be used for future project-specific tiering. While a Climate Action Plan that is not considered "qualified" may not be utilized for this specific tiering purpose under CEQA Guidelines Section 15183.5(b), that same Climate Action Plan may still be used for consideration of a project's consistency with a local plan

adopted for the purpose of reduction GHG emissions. According to CEQA Guidelines Section 15183.5(b), for a Greenhouse Gas Reduction Plan to be considered a "qualified" reduction strategy capable of being utilized for a streamlined or tiered analysis under CEQA must complete the following requirements:[64]

- Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendments I the plan is not achieving specified levels; and
- Be adopted in a public process following environmental review.

California Supreme Court GHG Ruling

In a November 30, 2015, ruling on the Newhall Ranch project, the California Supreme Court in *Center for Biological Diversity v. California Department of Fish and Wildlife* concluded that whether the project was consistent with meeting Statewide emission reduction goals is a legally permissible criterion of significance, but the significance finding for the project was not supported by a reasoned explanation based on substantial evidence.[65] The Court offered potential solutions to address this issue, which are summarized below. Specifically, the Court advised that:

- **Substantiation of Project Reductions from BAU**. A lead agency may use a BAU comparison based on the Scoping Plan's methodology if it also substantiates the reduction a particular project must achieve to comply with Statewide goals (page 25).
- **Compliance with Regulatory Programs or Performance Based Standards**. A lead agency "might assess consistency with AB 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities" (page 26).
- **Compliance with GHG Reduction Plans or Climate Action Plans**. A lead agency may utilize "geographically specific GHG emission reduction plans" such as Climate Action Plans (CAPs) or GHG emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis (page 26).

[64] Association of Environmental Professionals (AEP). 2022. 2022 CEQA California Environmental Quality Act Statute and Guidelines.
[65] Supreme Court of California. 2015. Center for Biological Diversity v. California Department of Fish and Wildlife. November 30. Website: http://climatecasechart.com/case/center-for-biological-diversity-v-california-department-of-fish-and-wildlife/. Accessed April 19, 2022.

- **Compliance with Local Air District Thresholds**. A lead agency may rely on "existing numerical thresholds of significance for greenhouse gas emissions" adopted by, for example, local air districts (page 27).

Therefore, consistent with CEQA Guidelines Appendix G, the three factors identified in CEQA Guidelines Section 15064.4 and the Newhall Ranch opinion, GHG impacts would be considered potentially significant if a project would:

- Conflict with a compliant GHG Reduction Plan if adopted by the lead agency;
- Exceed the applicable GHG Reduction Threshold; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of GHGs.

Regional

Plan Bay Area 2050: Strategy for a Sustainable Region

On October 21, 2021, the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) adopted Plan Bay Area 2050, an integrated transportation and land-use strategy through 2050 that updates the nine-county region's long-range plan to meet the requirements of SB 375. Working in collaboration with cities and counties, the Plan Bay Area 2050 advances initiatives to expand housing and transportation choices, create healthier communities, and build a stronger regional economy. Plan Bay Area 2050 remains on track to meet a 20 percent per capita reduction of GHG emissions by 2035 from 2005 conditions.[66]

Bay Area Air Quality Management District 2050 Climate Resolution Goals

In 2013, the BAAQMD Board of Directors approved a Resolution (No. 2013-11) adopted a GHG goal and a commitment to developing a regional climate protection strategy that commits to the following.

- Setting a goal for the Bay Area region to reduce GHG emissions to 80 percent below 1990 levels by 2050.
- Developing a Regional Climate Protection Strategy to make progress toward the 2050 goal and to complement existing climate action efforts at the State, regional, and local levels.
- Preparing a work program to guide the BAAQMD climate protection activities in the near term.

Bay Area Air Quality Management District 2017 Clean Air Plan

The BAAQMD adopted the 2017 Clean Air Plan on April 19, 2017, to comply with State air quality planning requirements set forth in the California Health and Safety Code. The 2017 Clean Air Plan includes a wide range of control measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as PM, ozone, and toxic air contaminants, to reduce

[66] Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). 2021. Plan Bay Area 2050. October 21.

emissions of methane and other "super-greenhouse gases" that are potent climate pollutants in the near-term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

The proposed control strategy for the 2017 Clean Air Plan consists of 85 specific control measures targeting a variety of local, regional, and global pollutants. The control measures have been developed for stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and super-GHG pollutants. Implementation of some of the control measures could involve retrofitting, replacing, or installing new air pollution control equipment, changes in product formulations, or construction of infrastructure that have the potential to create air quality impacts.

Local

South San Francisco General Plan Update

The General Plan Update includes the following relevant policies and actions that assist in reducing or avoiding potential impacts related to GHG emissions:

Land Use and Community Design Element

Policy LU-1.1 Support mixed use activity centers. Support a network of vibrant mixed use activity centers located throughout the City. Mixed use centers should include business and services, housing, healthy food, parks, and other gathering places.

Action LU-1.1.2 Implement mixed use rezoning. Identify key activity areas that currently feature single-use commercial or residential zoning designations, and re-zone to allow for mixed use development that could provide more convenient access to local commercial.

Action LU-1.1.3 Complete neighborhoods study. Initiate a study to determine appropriate locations for siting everyday needs, including services, healthy food, public facilities, and shopping within a short walk, bike, or transit trip of all residents.

Policy LU-1.2 Connectivity in complete neighborhoods. Improve walk, bike, and accessibility in complete neighborhoods.

Action LU-1.2.1 Department coordination for complete neighborhoods planning. Ensure coordination between the Economic and Community Development and Public Works Departments to align needed transportation improvement projects with land use planning in complete neighborhoods.

Policy LU-2.1 Prioritize development near transit centers. Collaborate with developers and property owners to locate new housing, mixed use, and employment uses near transit centers to minimize reliance on personal automobiles.

Action LU-2.1.2 Develop Specific Plans around transit centers. Initiate a Request for Proposals (RFP) process to develop specific plans around key transit centers, including Caltrain and BART.

Action LU-2.1.4 Community benefits framework. Continue to update the community benefits framework that require new nonresidential development near transit centers to contribute to community goals and amenities, including parks, and public spaces, affordable housing, and transportation demand management.

Policy LU-4.4 Improve pedestrian and bicycle connectivity in residential neighborhoods. Link existing residential neighborhoods by providing convenient pedestrian and bicycle connections to nearby destinations, such as parks, public facilities, and shopping centers.

Sub-Areas Element

Policy SA-28.5 Require sustainable and environmentally sensitive design. Incorporate sustainable and environmentally sensitive design and equipment, energy conservation features, water conservation measures and drought-tolerant or equivalent landscaping, and sustainable stormwater management features.

A Prosperous Economy for All Element

Policy PE-2.1 Reinvest in industrial property. Within areas targeted for retention of industrial uses, support industrial property owners seeking to reinvest in and modernize their properties and come into compliance with environmental regulations, current building codes, and use/production of green energy.

Abundant and Accessible Parks and Recreation

Policy PR-11.2 Reduce long term operations and maintenance costs. Identify ways to reduce the City's long-term operations and maintenance costs, such as adapting more energy efficient technologies for park and recreation facilities, using low water landscape palettes and recycled water for irrigation, or exploring the use of artificial turf, alternative materials and other types of ground cover that do not require heavy maintenance or frequent mowing.

Equitable Community Services Element

Policy ECS-4.3 Identify reductions to long term operations and maintenance costs. Identify ways to reduce the City's long-term operations and maintenance costs, such as adapting more energy efficient technologies for facilities, using low water landscape palettes, and using recycled water for irrigation. Reinvest these future savings into additional equitable community services.

Community Health and Environmental Justice

Policy CHEJ-3.1 Support regional efforts to improve air quality and protect human health.

Action CHEJ-3.1.1 Monitor air quality in Lindenville, East of 101 and Downtown. Work with the Bay Area Air Quality Management District to establish and identify funding for air quality monitoring and reduction strategies. This action may include purchasing particulate matter ($PM_{2.5}$) monitors to track local air quality data in Lindenville, East of 101, and Downtown.

Action CHEJ-3.2.2 Adopt an ordinance establishing vehicle idling restrictions. Establish a local ordinance that exceeds the State vehicle idling restrictions where appropriate, including restrictions for bus layovers, delivery vehicles, trucks at warehouses and distribution facilities and taxis, particularly when these activities take place near sensitive land uses (schools, healthcare facilities, affordable housing, and elder and childcare centers). Manage truck idling in new residential neighborhoods in Lindenville and East of 101.

Action CHEJ-3.3.1 Explore incentives for pollution reduction. Explore opportunities for production, distribution, and warehousing uses in Lindenville and East of 101 to reduce pollution, such as greener trucks, energy efficient buildings, and other strategies.

Community Resilience Element

Policy CR-1.3 Mainstream municipal climate preparedness planning and assessment. Implement climate preparedness planning across City departments, programs, and operations.

Policy CR-2.2 Implement a variety of adaptation solutions. Pursue a comprehensive shoreline management plan that uses a variety of adaptation solutions to protect the shoreline and enhance ecosystem resilience.

Policy CR-5.1 Continue to implement Sign Hill wildfire mitigation measures (i.e., restoration and maintenance of native grass and scrubland habitat, removal of non-native trees and trees killed in October 2020 fire, removal of dead trees due to drought and disease and maintenance of existing trails to function as fire breaks).

Policy CR-5.2 Maintain a comprehensive fire hazard management program to reduce fire hazards on other public lands.

Policy CR-6.1 Support resilient building design. Support resilient building design by helping residents weatherize homes to keep them cooler and more energy efficient and to improve indoor air quality.

Action CR-6.1.1 Review and update funding programs for resilient building design. Review and update existing funding programs, such as the Property-Assessed Clean Energy program to promote climate-resilient design and retrofits.

Policy CR-6.3 Reduce the heat island effect by implementing a variety of adaptation solutions.

Action CR-6.3.1 Identify areas of greatest risk of urban heat island effect and target resources in these areas, including tree planting, cool roofs, and installation of cool pavement.

Policy CR-6.4 Review, update, and maintain facilities that can be used as refuge during excessive heat and cold days.

Climate Protection Element

Policy CP-1.1 Maintain and update the Climate Action Plan. Maintain and regularly update the City's Climate Action Plan to reduce greenhouse gas (GHG) emissions generated within the City. Ensure the City's GHG emission target is consistent with California's GHG reduction goals in order to be a qualified plan for California Environmental Quality Act (CEQA).

Action CP-1.1.1 Update greenhouse gas reduction measures. Regularly (every 3-5 years) refine goals, policies, and actions designed to achieve the greenhouse gas reduction goal.

Action CP-1.1.2 Establish greenhouse gas emission thresholds. Establish greenhouse gas (GHG) emission thresholds for use in evaluating non-exempt discretionary project consistent with the California Environmental Quality Act and require projects above that threshold to substantially mitigate all feasible GHG emissions and to reduce emissions below the established thresholds.

Policy CP-1.2 Monitor progress toward carbon neutrality goal. Track and report progress toward achieving the City's greenhouse gas reduction goal.

Policy CP-1.3 Utilize innovative technologies to reduce emissions. Utilize new technologies as they become available to reduce greenhouse gas (GHG) emissions by regularly evaluating new and emerging technology changes that can help to reduce GHG emissions, and by encouraging the use of such technology when it is demonstrated to be effective at reducing GHG emissions and a fiscally responsible investment.

Policy CP-1.4 Explore innovative pilot programs. Explore the potential for innovative greenhouse gas reduction pilot programs, including collaborations and partnerships, in each emissions sector (e.g., buildings and energy, transportation, solid waste, water, and carbon sequestration).

Policy CP-1.5 Seek funding to support greenhouse gas emissions reduction. Seek additional funding to support implementation of greenhouse gas reduction projects, exploring grant funding, rebates, and other incentive opportunities.

Policy CP-1.6 Community education about greenhouse gas reduction incentives. Educate residents and businesses about opportunities to reduce greenhouse gas emissions through grand funding, rebates, and other incentive opportunities.

Policy CP-2.1 Maintain Peninsula Clean Energy membership. Maintain City membership in Peninsula Clean Energy and continue to work to maintain a high level of private property owner participation in PCE.

Policy CP-2.2 Reduce emissions associated with natural gas infrastructure. Partner with the Pacific Gas and Electric Company to develop options for reducing greenhouse gas emissions associated with the existing natural gas grid.

Policy CP-2.2 Develop community solar projects. Explore the development of community solar projects.

Policy CP-2.4 Install energy resilience infrastructure. Provide energy resilience via backup energy systems, microgrids, and other measures that serve the community during emergency events, particularly supporting disadvantaged communities, including considering creating a financial incentive program for existing and new solar/battery backup system installations.

Policy CP-3.1 Building code maintenance for new and major renovations (energy efficiency). Regularly update South San Francisco's building codes to improve the energy performance of new construction and major remodels and to phase in requirements in predicable ways.

Action CP-3.1.1 Incentivize energy efficient new construction. Provide incentives to encourage new construction to exceed California's Building Energy Efficiency Standards outlined in Title 24, Part 6.

Policy CP-4.1 Establish efficiency upgrade programs. Establish an energy and water efficiency upgrade program for existing buildings, focusing resources on the most disadvantaged communities.

Action CP-4.1.1 Energy audits for homes and businesses. Work with Peninsula Clean Energy, San Mateo County Energy Upgrade to provide free to low-cost energy audits.

Action CP-4.1.2 Adopt Commercial Benchmarking ordinance. Adopt energy and water benchmarking ordinance for commercial buildings over 10,000 square feet to empower owners to control utility costs.

Policy CP-4.2 Prepare a Building Electrification Plan. Develop a date certain, phased-in Existing Building Electrification Plan to retrofit existing homes and businesses to all electric.

Policy CP-4.4 Community education about energy and water incentives. Educate residents and businesses on available incentive opportunities to reduce energy and water use.

Policy CP-5.1 Require minimum of LEED™ Silver rating or equivalent for new buildings. Require all new municipal buildings and facilities to meet a minimum LEED™ Silver rating as certified by the US Green Building Council or equivalent green building rating system. Require feasibility studies for zero-net-energy use, on-site renewable energy generation, and on-site batteries.

Policy CP-5.4 Require 75 percent waste diversion for municipal construction and demolition projects. Require municipal construction projects to achieve 75 percent waste diversion from the landfill.

Policy CP-5.5 Energy resilience of municipal buildings. Require municipal building and facility new construction and major renovation projects to evaluate the feasibility of incorporating on-site batteries that store electricity from on-site renewable energy generation to supply the building and community with electricity in the event of a disaster.

Policy CP-8.1 Evaluate system efficiency. Continuously evaluate and, as appropriate, replace systems at the wastewater treatment plant to reduce energy use.

Mobility and Access Element

Policy MOB-4.1 Increase substantially the proportion of travel using modes other than driving alone.

Action MOB-4.1.1 Use site plan review to improve connectivity. Use the development review process to identify opportunities to enhance bicycle, pedestrian, and transit Action connectivity.

Action MOB-4.1.2 Expand transit service. Continue collaboration with Caltrain, SamTrans, Water Emergency Transportation Authority (WETA), and shuttle providers to scale service levels in growing areas. Consider independently operated transit services to fill regional transit gaps.

Action MOB-4.1.3 Leverage employee transit subsidies. Leverage private sector subsidies of transit fares to support BART, Caltrain, SamTrans, and Water Emergency Transportation Authority (WETA) ridership.

Action MOB-4.1.4 Incorporate first/last mile connections. Incorporate first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.

Policy MOB-4.2 Embrace innovation. Prepare the City for changes to transportation technology (such as autonomous vehicles and micro-mobility) and incorporate such innovations into projects when appropriate and where feasible.

City of South San Francisco Climate Action Plan

As part of the proposed project, the City of South San Francisco is updating its 2014 CAP to align with new State regulations and targets related to climate change. The 2014 CAP set an emissions target for 2020 and the updated 2022 CAP extends the horizon year to 2040 and sets a long-term goal of carbon neutrality by 2045 to align with State targets. Consistent with the reduction goal established by AB 32 and the Governor's Office of Planning and Research (OPR) guidance on CAP development, an emissions baseline may be established between 2005 and 2008 to represent an

assumed 15 percent increase from 1990 levels. As such, the City in its 2014 CAP established a 2005 emissions baseline which represented an assumed 15 percent increase from its 1990 emission levels. Accordingly, the 2014 CAP set a 2020 GHG reduction target of a 15 percent decrease in emissions from its 2005 baseline, consistent with the AB 32 reduction target of reducing emissions to 1990 levels by 2020.

The updated 2022 CAP aligns the City with Statewide emission reduction targets and a reduction strategy to reduce GHG emissions by 40 below its 2005 baseline by 2030 and achieve carbon neutrality by 2045.

The General Plan Update is a long-range policy document that maps out how the City of South San Francisco serves its community. Complementing the vision and direction established in the General Plan Update, the CAP is a key mechanism to promote climate action. The CAP represents the City's program to reduce GHG emissions in line with State targets, contributing to Statewide efforts to address climate change. GHG reduction-related policies and actions are integrated throughout the General Plan Update in the Climate Protection Element, Environmental and Cultural Stewardship Element, Equitable Community Services Element, and the Mobility and Access Element.

The updated 2022 CAP is being processed concurrently with the General Plan Update process in an effort to ensure that the General Plan Update is aligned with the targeted reductions set forth in the updated 2022 CAP. As such, implementation of the updated 2022 CAP, which has goals consistent with Statewide emissions reduction targets, along with implementation of General Plan Update which includes several policies and measures included in the updated 2022 CAP, will ensure that the City of South San Francisco achieves its reduction targets outlined in the updated 2022 CAP.

Additionally, the updated 2022 CAP includes the following actions that assist in reducing or avoiding impacts related to GHG emissions:

Action CE 1.1 Require the construction of any new nonresidential conditioned space of 5,000 square feet or more, or the conversion of unconditioned space 5,000 square feet or more, to meet a minimum of 50 percent of modeled building electricity needs with on-site renewable energy sources, as is feasible. To calculate 50 percent of building electricity needs for the new conditioned space, the applicant shall calculate building electricity use as part of the Title 24 compliance process. Total electricity use shall include total use for the new conditioned space excluding process energy.

Action CE 1.2 Establish a streamlined approval process for battery storage systems and reduce or eliminate permitting fees to encourage the addition of battery storage.

Action CE 1.3 Establish a streamlined PV system permitting and approval process to encourage the addition of solar PV systems.

Action CE 1.4 Provide energy resilience via backup energy systems, microgrids, and other measures that serve the community during emergency events, particularly

supporting disadvantaged communities, including considering creating a financial incentive program for existing and new solar/battery backup system installations.

Action CE 1.5 Work with PG&E to minimize the impacts of Public Safety Power Shutoffs and to prevent utility shutoff during extreme heat events.

Action CE 1.6 Explore the opportunities to install community scale solar PV or other renewable energy systems including biogas to support local energy resiliency and provide renewable energy to disadvantaged communities.

Action CE 2.1 Maintain City membership in Peninsula Clean Energy and continue to work to maintain a minimum of 95 percent of private property owner participation in PCE.

Action BNC 1.1 Provide a combination of financial and development process incentives (e.g., expedited permitting, FAR increases, etc.) to encourage new development to exceed Title 24 energy efficiency standard.

Action BNC 2.1 Implement residential all-electric reach code and adopt all-electric reach code for nonresidential new construction. Exempt occupancies must install electric building systems (e.g., space and water heating equipment) where feasible. Until the adoption of the nonresidential all-electric reach code, require any new nonresidential conditioned space of 5,000 square feet or more, or the conversion of unconditioned space 5,000 square feet or more to comply with CALGreen Tier 2 energy efficiency requirements to exceed mandatory energy efficiency requirements by 20 percent or more. For additions to existing development of 5,000 square feet or more, CALGreen Tier 2 shall be calculated as part of the Title 24 compliance process. Existing building space already permitted shall not be subject to CALGreen Tier 2 requirements.

Action BE 1.1 Encourage residential properties older than 10 years to provide an energy audit or EPA Home Energy Score at time of sale.

Action BE 1.2 Update zoning and building codes to require alternations or additions at least 50 percent the size of the original building to comply with minimum CALGreen requirements.

Action BE 1.3 Promote rebate programs for household appliances including those from Bay Area Air Quality Management District (BAAQMD).

Action BE 1.4 Work with Peninsula Clean Energy and San Mateo County Energy Upgrade to provide free to low-cost energy audits.

Action BE 1.5 Work with PG&E and PCE to implement deep retrofits in the existing building stock, focusing resources in the most disadvantaged communities.

Action BE 1.6 Adopt energy and water benchmarking ordinance for commercial buildings over 10,000 square feet to empower owners to control utility costs.

Action BE 1.7 Work with PG&E and PCE to implement retro-commissioning in the existing building stock.

Action BE 1.8 Work with PG&E and PCE to transition backup generators from diesel to carbon-free sources including battery storage systems.

Action BE 2.1 Develop a date certain, phased-in Existing Building Electrification Plan to retrofit 90 percent of existing homes and businesses to all electric by 2040.

Action BE 2.2 Require electric panel upgrades upon sale and/or rental turnover for single-family and low-rise residential.

Action BE 2.3 Require gas appliances (stove, clothes dryer, water heater) to be replaced with an electric alternative when they fail or reach the end of their useful life.

Action BE 2.4 Adopt an all-electric reach code for major renovations, alterations, additions.

Action TL 1.1 Implement EV reach code.

Action TL 1.2 Seek opportunities to install additional electric vehicle chargers at suitable public facilities, including Downtown parking structures and community and regional parks.

Action TL 2.1 Implement an East of 101 area trip cap with triennial monitoring and corrective actions if exceeded to manage the number of vehicles entering the area.

Action TL 2.2 Implement, monitor, and enforce compliance with the City's TDM Ordinance.

Action TL 2.3 Evaluate the current and best use of curb space in the City's activity centers and repurpose space to maximize people served (i.e., for loading, bikeways, bike parking, bus lanes, EV charging, or parklets).

Action TL 2.4 Incorporate maximum parking requirements for new residential and office/R&D projects.

Action TL 2.5 For all new land use and transportation projects, adhere to the City's VMT Analysis Guidelines and qualitatively assess the project's effect on multimodal access. Use the development review process to identify opportunities to enhance bicycle, pedestrian, and transit connectivity.

Action TL 2.6 Ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled. Develop a Capital Improvement Program (CIP) prioritization

criteria, including equity considerations for SB 1000 neighborhoods, to strategically advance multimodal Complete Streets projects. All capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans.

Action TL 2.7 Develop a dedicated funding source or leverage private sector contributions to fund the South City shuttle and free bus service for South City residents.

Action TL 2.8 Leverage public-private partnerships to increase transit ridership and improve transit station access by incorporating first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.

Action TL 2.9 Continue collaboration with Caltrain, SamTrans, WETA, and shuttle providers to scale service levels in growing areas and leverage private sector subsidies of transit fares to support BART, Caltrain, SamTrans, and WETA ridership.

Action SW 1.1 Adopt an SB 1383 compliant zero-waste plan for municipal operations and the community that includes: mandatory residential and commercial recycling and collection of organics/food waste, mandatory commercial edible food recovery program (per MOU with San Mateo County Office of Sustainability), and updated trash enclosure space and access requirements based on hauler recommendations to accommodate all waste streams (e.g., recycling, trash, and organics).

Action SW 1.2 Continue to work with SSF Scavenger to ensure implementation of waste reduction targets.

Action SW 1.3 Establish compliance pathways and enforcement mechanisms for mandatory organics and food waste diversion.

Action SW 1.4 Develop education and technical assistance programs to help all residents and businesses to compost and recycle.

Action SW 1.5 Explore modifying waste rate structures to encourage efficiency in future franchise agreements.

Action SW 1.6 Establish a green purchasing program for City of South San Francisco municipal operations.

Action WW 1.1 Achieve greater water use reductions than WELO by requiring all landscapes obtain a landscape permit, decreasing the size threshold to capture all landscape renovations, adding prescriptive irrigation plant lists, or water budget requirements.

Action WW 1.2 Explore options at the South San Francisco–San Bruno Water Quality Control Plant for delivering nonpotable, recycled water for cooling towers, processes, and irrigation in East of 101 (e.g., flow pipe water). Maximize available nonpotable water reuse from Orange Park Stormwater Capture project, at Orange Memorial Park, Centennial Way, and new Civic Campus.

Action WW 1.3 Create a streamlined permit process for laundry-to-landscape greywater systems.

Action WW 1.4 Develop a plant list, landscaping palette for efficiency and habitat/wildlife for new development and landscape retrofits.

Action WW 1.5 Partner with CalWater to install smart water meters throughout the City.

Action WW 2.1 Require high-efficiency fixtures in all new construction and major renovations, comparable to CALGreen Tier 1 or 2 standards.

Action WW 2.2 Promote available water conservation rebates from BayREN, CalWater, and other sources focusing resources in the most disadvantaged communities.

Action CS 1.1 Explore compost application on available acres of appropriate open space.

Action CS 2.1 Expand the canopy cover to reach the goals of the Urban Forest Master Plan and increase environmental benefits, prioritizing disadvantaged communities and connected wildlife corridors.

Action CS 2.2 For nonresidential and residential new construction, require silva cell structures and soil compaction plan for tree growth, and require the preservation and addition of trees on private property in residential neighborhoods through design review where appropriate. Incorporate Parks and Recreation urban forest staff in the review process.

Action CS 3.1 Enhance Colma Creek as an ecological corridor, restoring 5 miles of creek ecologies and creating transitional habitat zones to build resilience and ecosystem services. Protect and expand existing marsh and wetland habitat to improve water quality, adapt to climate change, and provide habitat for wildlife.

Action CL 1.1 Require all new municipal buildings and facilities to meet a minimum LEED™ Silver standards as outlined by the US Green Building Council or equivalent green building rating system. Require feasibility studies for zero-net-energy use, on-site renewable energy generation, and on-site batteries.

Action CL 1.2 Regularly benchmark the environmental performance of municipal buildings, landscaping, parks and facilities, including energy and water use.

Action CL 1.3 To reduce operating and maintenance costs, use the benchmarking data to identify opportunities for environmental performance improvements through audits, retro-commissioning, and building efficiency and electrification retrofits.

Action CL 1.4 Require municipal construction projects to achieve 75 percent waste diversion from the landfill.

Action CL 1.5 Require municipal building and facility new construction and major renovation projects to evaluate the feasibility of incorporating on-site batteries that store electricity from on-site renewable energy generation to supply the building and community with electricity in the event of a disaster.

Action CL 1.6 Transition fleet vehicles from gasoline and diesel to ZEV (CNG, fuel cell, electric) as feasible ZEV alternatives become available and no later than 2040. Transition City owned and operated small gas engines (e.g., push mowers, trimmers, blowers etc.) to all electric by 2024 in line with State mandate.

Action CL 1.7 Adopt municipal TDM policy or participate in City ordinance that encourages alternatives to SOVs and established telecommute policy to allow remote work when feasible.

Action CL 2.1 Track and report progress toward achieving the City's greenhouse gas reduction goal.

Action CL 2.2 Update the community greenhouse gas inventory every five years.

Action CL 2.3 Prepare an inventory of emissions from municipal operations, establish a GHG reduction target, and develop a work plan to reduce municipal emissions to achieve carbon neutrality by 2045.

Action CL 2.4 Explore the potential for innovative greenhouse gas reduction pilot programs, including collaborations and partnerships, in each emissions sector (e.g., buildings and energy, transportation, solid waste, water, and carbon sequestration).

Action CL 2.5 Seek additional sources of funding to support implementation of greenhouse gas reduction projects, exploring grant funding, rebates, and other incentive opportunities.

Action CL 2.6 Educate residents and businesses about opportunities to reduce greenhouse gas emissions through grant funding, rebates, and other incentive opportunities. Establish an environmental interpretative program to raise awareness about environmental issues and climate adaptation throughout the City.

City of South San Francisco Municipal Code

Chapter 8.69 Affordable Housing Commercial Linkage Fees

Chapter 8.69 of the Municipal Code seeks to offset the demand for affordable housing that is created by new commercial development by requiring certain commercial development projects to pay a commercial linkage fee, which would offset the demand for affordable housing that is created by new commercial development and help mitigate impacts that accompany new commercial development by reducing traffic, transit, and related air quality impacts.

Chapter 13.30 Tree Preservation

Chapter 13.30 of the Municipal Code intends to preserve trees in the City in order to counteract air pollution and oxygenate the air.

Chapter 15.22 California Green Building Code

Section 15.22.010 (California Green Building Standards Code) adopts the California Green Building Standards Code, 2019 Edition, published by the California Building Standards Commission by reference, with specific amendments.

Chapter 15.26 California Energy Code

Section 15.26.010 (California Energy Code) adopts the California Energy Code 2019 Edition, published by the International Code Council by reference, with specific amendments.

Chapter 15.60 Recycling and Diversion of Debris from Construction and Demolition

Chapter 15.60 promotes the redirection of recyclable materials generated during construction away from landfills. All project applicants are required to complete and submit a recycling management plan to estimate the volume of debris to be generated during construction and the estimated amount of debris that would be sent to the landfill.

Section 15.62 (Deconstruction and Salvage and Recovery) encourages contractors to make every structure planned for demolition available for deconstruction, salvage, and recovery prior to demolition; and to recover the maximum feasible amount of salvageable designated recyclable and reusable materials prior to demolition, but at least at the rate set forth in Section 4.408 of Chapter 4 of CALGreen, as may be amended from time to time.

Chapter 15.62 Solar Energy System Review Process

Chapter 15.62 of the Municipal Code aims to encourage the use of solar energy systems and comply with the Solar Rights Act by reducing local discretion in permitting for solar energy systems and creating an expedited, streamlined solar permitting process for small residential rooftop solar energy systems. This chapter allows the City to achieve these goals while protecting the public health and safety.

City of South San Francisco Zoning Ordinance

The following chapters of the South San Francisco Zoning Ordinance, including the new or revised chapters of the Zoning Ordinance that are part of the proposed project, assist in reducing or avoiding impacts related to GHG emissions.

Chapter 20.300 Lot and Development Standards (revised)

Section 20.300.007 (Landscaping) (revised) includes a number of requirements for new construction or rehabilitated landscapes to aid in energy conservation by providing shade from the sun and shelter from the wind and encourage the conservation of water resources through the use of native and drought-tolerant plans and water-conserving irrigation practices.

Section 20.300.008 (Lighting and Illumination) (revised) establishes regulations that allow outdoor lighting for uses and activities consistent with the need for utility, safety, and nighttime attractiveness while minimizing:

1. Light escaping directly from fixtures or indirectly after reflection from surfaces into the atmosphere which causes increased artificial sky brightness;
2. Glare arising directly from fixtures or from over-illuminated outdoor areas which interferes with effective vision;
3. Energy waste which increases impacts on the environment through energy production byproducts;
4. Light trespass across property lines; and
5. Potential disruption to nocturnal ecosystems including human health.

Chapter 20.480 Design Review (revised)

Section 20.480.002 (Applicability) (revised) requires design review for all projects that require a building permit that involve construction, reconstruction, rehabilitation, alteration, or other improvements to the exterior of a structure or parking area, except for projects developed in compliance with a previous design review approval.

Section 20.480.003 (Assignment of Design Review Responsibilities) (revised) states that the Planning Commission has design review authority for all projects requiring Planning Commission approval and all new commercial, downtown, employment, mixed-use, office, and multi-family developments. The Planning Commission shall also consider the Design Review Board's recommendations and shall approve, conditionally approve, or deny the design review application.

Section 20.480.006 (Design Review Criteria) (revised) states that when conducting design review, the Design Review Board, Chief Planner, Planning Commission, or City Council shall evaluate applications to ensure that they conform to the policies of the General Plan and any applicable specific plan, are consistent with any other policies or guidelines the City Council may adopt, and satisfy specific criteria outlined in this code, such as those related to a building, structure or signage; parking areas; open space, and pedestrian areas; and electrical and mechanical equipment or works, among other criteria. Ultimately, the code states that a project's design features are reviewed in consideration of achieving a safe, efficient, and harmonious development, and shadow patterns, and that components considered in design review shall include safety.

Section 20.480.010 (Appeals; Expiration, Extensions, and Modifications) (revised) states a decision made by the Chief Planner on a project shall be subject to review by the Planning Commission either

on appeal by the applicant or upon motion of the Planning Commission. If the Planning Commission fails to make an order to review the Chief Planner's determination at its next regular meeting after the determination, then the Chief Planner's determination shall be final. In addition, for expirations, extension, and modifications, design review approval is effective and may only be extended or modified as detailed in Chapter 20.450, Common Procedures.

South San Francisco Construction and Demolition Waste Management Plan

The City is mandated by the State of California to divert 65 percent of all solid construction waste from landfills either by reusing or recycling. To help meet this goal, a city ordinance requires completion of a Waste Management Plan for covered building projects identifying how at least 65 percent of non-inert project waste materials and 100 percent of inert materials will be diverted from the landfill through recycling and salvage.[67]

3.7.4 - Methodology

Impacts related to GHG emissions resulting from implementation of the proposed project (collectively, the General Plan Update, Zoning Code Amendments, and updated 2022 CAP) are discussed below. The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was developed in collaboration with the South Coast Air Quality Management District and other air districts throughout the State. CalEEMod is designed as a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential GHG emissions associated with construction and operation from various land uses. Version 2020.4.0 was utilized as it was the most recent version of CalEEMod available and was the model for land use emissions modeling recommended by the BAAQMD at the time this analysis was prepared. CalEEMod Version 2020.4.0 was used to compute GHG emissions from area sources, energy sources, solid waste generation, and water and wastewater sources for the project buildout year of 2040 (see Appendix B). CalEEMod Version 2020.4.0 utilizes the ARB's Emission Factor (EMFAC 2017) to calculate mobile source emissions; however, at the time this analysis was prepared, the ARB has since developed and adopted EMFAC 2021, the next update beyond EMFAC 2017. Therefore, GHG emissions from mobile sources were calculated using EMFAC 2021 based on VMT data analyzed in Section 3.14, Transportation.

3.7.5 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether greenhouse emissions impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

[67] City of South San Francisco. 2017. City of South San Francisco Construction and Demolition Waste Management Plan. Website: https://www.ssf.net/home/showdocument?id=2416. Accessed April 19, 2022.

Greenhouse Gas Emissions

In the 2017 Climate Change Scoping Plan, the ARB recommends local plan-level GHG emission efficiency targets of no more than 6.0 MT CO_2e per capita by 2030 and no more than 2.0 MT CO_2e per capita by 2050 to demonstrate consistency with long-term reduction goals. The City has chosen to utilize these reduction targets as the threshold for determining impact significance for the proposed project.

Based on a linear interpolation of these reduction targets, the 2017 Scoping Plan GHG per capita metrics of 6.0 MT CO_2e per capita per year in 2030 and 2.0 MT CO_2e per capita per year in 2050, the proposed target for the proposed project would be no more than 4.0 MT CO_2e per service population by 2040. It should be noted that the metrics from the Scoping Plan are expressed in terms of per capita while the City's significance threshold metrics are expressed in per service population.

The Scoping Plan identifies these long-term metrics in terms of per capita as it recommends an efficiency metric which is based on the total forecasted population of the State and the total forecasted emissions inventory for the State, both of which encompass residents, employees, and subsequent development activities across local jurisdictions. Because of the geographic position of the City of South San Francisco, it is common for City residents to travel and recreate outside of City boundaries. Similarly, employment within City boundaries is not exclusive to City residents, and it is highly likely that future development facilitated by the proposed project which would create employment opportunities would employ residents from nearby jurisdictions who commute into City boundaries. As such, GHG emissions generated by future development facilitated by the proposed project would be the result of the housing and employment of residents of both the City as well as neighboring jurisdictions. In other words, due to its geographic position in the San Francisco Bay Area, the City of South San Francisco's current and future GHG emission generation is the result of population growth and economic activity of the City as well as neighboring Cities. Therefore, utilizing a per service population metric for determining impact significance is more appropriate than a per capita metric in a jurisdiction such as the City of South San Francisco. The proposed project would result in a potentially significant impact if it were to result in greater than 4.0 MT CO_2e per service population by 2040.

Qualified Climate Action Plan

As previously discussed, the updated 2022 CAP included as part of the proposed project is intended to establish an analytical pathway for future development projects facilitated by the proposed project under CEQA Section 15183.5(b). CEQA Guidelines Section 15183.5(b) allows projects and plans to be analyzed through a streamlined or tiered approach utilizing an adopted Greenhouse Gas Reduction Plan. According CEQA Guidelines Section 15183.5(b), for a Greenhouse Gas Reduction Plan to be considered a "qualified" reduction strategy capable of being utilized for a streamlined or tiered analysis under CEQA, it must complete the following requirements:[68]

[68] Association of Environmental Professionals (AEP). 2022. 2022 CEQA California Environmental Quality Act Statute & Guidelines.

- Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendments I the plan is not achieving specified levels; and
- Be adopted in a public process following environmental review.

The updated 2022 CAP is analyzed herein to determine whether it meets the qualifying standards set forth by CEQA Guidelines Section 15183.5(b). In order for the updated 2022 CAP to be considered a "qualified" reduction strategy to be used in the future under CEQA Section 15183.5(b), it must demonstrate compliance with the applicable provisions from CEQA Guidelines Section 15183.5(b)(2), which is identical to the list provided above.

As a qualified GHG reduction strategy, the CAP would enable streamlined environmental review of future development projects. The CAP quantifies existing and projected GHG emissions generated by activities, including implementation of the General Plan Update, through horizon year 2040, and includes GHG emissions reduction targets. The CAP also contains actions that demonstrate the City's commitment to achieve State GHG reduction targets through monitoring and reporting processes to ensure that targets are met, and options for reducing GHG emissions beyond State requirements. If the CAP is adopted, projects that demonstrate consistency with the proposed project would be eligible for streamlined CEQA review pursuant to CEQA Guidelines Section 15183.5. As part of the annual reporting requirements, the City will provide the status of implementing actions for each reduction strategy in the CAP (e.g., initiated, ongoing, completed), assess the effectiveness of each strategy, and recommend adjustments to programs or actions as needed.

Consistency With an Adopted Greenhouse Gas Reduction Plan

For this impact to be less than significant, the proposed project must demonstrate consistency with the applicable GHG emissions reduction plan, which does not need to be a "qualified" reduction strategy under CEQA Guidelines Section 15183.5(b). As previously discussed, if an adopted Greenhouse Gas Reduction Plan is not considered "qualified," it means it did not meet the requirements established under CEQA Guidelines Section 15183.5(b) and is not eligible to be used for future project-specific tiering. While a Greenhouse Gas Reduction Plan that is not considered "qualified" may not be utilized for this specific tiering purpose under CEQA Guidelines Section 15183.5(b), that same Plan or Strategy may still be used for consideration of a project's consistency with a local plan adopted for the purpose of reduction GHG emissions. As such, the proposed project would be determined to conflict with the applicable GHG emissions reduction plan if it would not

adhere to applicable GHG reduction measures and policies included in the BAAQMD's 2017 Clean Air Plan, the MTC/ABAG Plan Bay Area 2050, and the ARB's 2017 Scoping Plan.

3.7.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Greenhouse Gas Emissions

Impact GHG-1:	**The proposed project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.**

Construction

Detailed construction information for individual projects is unknown at this time, but construction activities associated with future development under the proposed project would generate temporary short-term GHG emissions from heavy-duty construction equipment, worker commute trips, and material delivery trips (i.e., vendor trips), and hauling trips. On-site activities would consist of the operation of off-road construction equipment, as well as on-site truck travel (e.g., haul trucks, dump trucks, and concrete trucks). Off-site sources would include emissions from construction vehicles used for hauling materials and worker vehicle trips. These activities would result in GHG emissions limited in duration for any given project, but when taken together over buildout of the proposed project, could be considerable. The ARB's 2017 Scoping Plan does not recommend thresholds of significance for GHG emissions resulting from construction activities at the plan level. Rather, the City would consider construction emissions to be potentially significant if a project would not incorporate Best Management Practices (BMPs) to reduce GHG emissions during construction. As discussed in Section 3.2, Air Quality, new development facilitated by the proposed project would include BMPs for reducing construction emissions of PM_{10} and $PM_{2.5}$ through Mitigation Measure (MM) AIR-1a. The provisions contained in MM AIR-1a would help reduce construction-related GHG emissions, such as the idling limitation for equipment and vehicles.

In addition to GHG-reducing provisions contained in MM AIR-1a, the General Plan Update includes policies and actions specifically designed to address GHG emissions during project construction activities. Policy CHEJ-3.1 requires the City to support regional efforts to improve air quality and protect human health. Action CHEJ-3.1.1 requires the City to work with the BAAQMD to establish and identify funding for air quality monitoring and reduction strategies. This action may include purchasing particulate matter ($PM_{2.5}$) monitors to track local air quality data in Lindenville, East of 101, and Downtown. Action CHEJ-3.2.2 requires the City to establish a local ordinance that exceeds the State vehicle idling restrictions where appropriate, including restrictions for bus layovers, delivery vehicles, trucks at warehouses and distribution facilities and taxis, particularly when these activities take place near sensitive land uses (schools, healthcare facilities, affordable housing, and elder and childcare centers). Action CHEJ-3.2.2 also requires the City to manage truck idling in new residential neighborhoods in Lindenville and East of 101. Lastly, Policy CP-5.4 requires 75 percent waste diversion for municipal construction and demolition projects.

The South San Francisco Municipal Code contains rules and regulations to reduce GHG emissions during construction. Chapter 15.60 promotes the redirection of recyclable materials generated during construction away from landfills. All project applicants are required to complete and submit a recycling management plan to estimate the volume of debris to be generated during construction and the estimated amount of debris that would be sent to the landfill. Section 15.62 (Deconstruction and Salvage and Recovery) requires the City to encourage contractors to make every structure planned for demolition available for deconstruction, salvage, and recovery prior to demolition; and to recover the maximum feasible amount of salvageable designated recyclable and reusable materials prior to demolition, but at least at the rate set forth in Section 4.408 of Chapter 4 of the CALGreen, as may be amended from time to time.

There are no policies identified in the Zoning Code Amendments and no Actions identified in the updated 2022 CAP that specifically address GHG emissions during construction.

Future development under the proposed project would be required to comply with the requirements of the South San Francisco Municipal Code, the General Plan Update policies and actions, and MM AIR-1a, to reduce GHG emissions during construction. In addition, future development would be required to comply with California Code of Regulations Title 13, Sections 2449(d)(3) and 2485, that limit idling from both on-road and off-road diesel-powered equipment and are enforced by the ARB (see Section 3.5, Energy). Therefore, construction of future development under the proposed project would not result in potentially significant impacts related to GHG emissions after inclusion of identified mitigation and compliance with local policies and regulations. As such, this impact would be less than significant with incorporation of MM AIR-1a.

Operation

Long-term operational sources of GHG emissions associated with the proposed project would include mobile sources (e.g., vehicle exhaust), energy consumption (e.g., electricity and natural gas), solid waste, wastewater treatment, and water consumption (e.g., electricity used to deliver and treat water consumed by customers in the City). The operational GHG emissions from buildout of the proposed project have been calculated through use of the CalEEMod model for area sources, energy usage, solid waste, and water and wastewater and EMFAC 2021 for mobile sources (see Appendix B). The operational GHG emissions are based on proposed project buildout conditions within the Planning Area at 2040, including up to 38,959 dwelling units and up to 50,052,914 square feet of nonresidential space.[69] The GHG emissions forecast assumes that several State and local GHG reduction measures will be implemented by 2040, including the following actions:

- Implementation of the Renewable Portfolio Standard, which requires electricity providers to increase the portion of energy that comes from renewable sources to 60 percent by 2030 and zero-carbon by 2045;
- Implement of the most current Title 24 building energy use standards;

[69] Nonresidential space from the Mixed-Use area is conservatively estimated to be 50 percent residential and 50 percent nonresidential space

- Reduction of indoor residential and indoor/outdoor commercial lighting energy usage as detailed in AB 1109;
- Implementation of California Advanced Clean Car, including Pavley standards and Executive Order N-79-20 that requires 100 percent of new passenger vehicles sold in California to be zero-emissions by 2035;
- Adoption of Complete Streets standards to expand pedestrian and bicycle infrastructure and provide availability for future residents and visitors with infrastructure for alternative modes of transportation and reduce reliance on motorized transportation; and
- Improvements to public transit and ridesharing programs.

In addition to the above State and local GHG reduction measures, the following General Plan Update policies and updated 2022 CAP actions would help reduce GHG emission generation from existing and future development:

General Plan Update Policies

Policy LU-1.2 Connectivity in complete neighborhoods. Improve walk, bike, and accessibility in complete neighborhoods.

Policy LU-2.1 Prioritize development near transit centers. Collaborate with developers and property owners to locate new housing, mixed use, and employment uses near transit centers to minimize reliance on personal automobiles.

Policy LU-4.4 Improve pedestrian and bicycle connectivity in residential neighborhoods. Link existing residential neighborhoods by providing convenient pedestrian and bicycle connections to nearby destinations, such as parks, public facilities, and shopping centers.

Policy SA-28.5 Require sustainable and environmentally sensitive design. Incorporate sustainable and environmentally sensitive design and equipment, energy conservation features, water conservation measures and drought-tolerant or equivalent landscaping, and sustainable stormwater management features.

Policy PE-2.1 Reinvest in industrial property. Within areas targeted for retention of industrial uses, support industrial property owners seeking to reinvest in and modernize their properties and come into compliance with environmental regulations, current building codes, and use/production of green energy.

Policy PR-11.2 Reduce long term operations and maintenance costs. Identify ways to reduce the City's long-term operations and maintenance costs, such as adapting more energy efficient technologies for park and recreation facilities, using low water landscape palettes and recycled water for irrigation, or exploring the use of artificial turf, alternative materials and other types of ground cover that do not require heavy maintenance or frequent mowing.

Policy ECS-4.3 Identify reductions to long term operations and maintenance costs. Identify ways to reduce the City's long-term operations and maintenance costs, such as adapting more energy efficient technologies for facilities, using low water landscape palettes, and using recycled water for irrigation. Reinvest these future savings into additional equitable community services.

Policy CHEJ-3.1 Support regional efforts to improve air quality and protect human health.

Policy CR-6.1 Support resilient building design. Support resilient building design by helping residents weatherize homes to keep them cooler and more energy efficient and to improve indoor air quality.

Policy CR-6.3 Reduce the heat island effect by implementing a variety of adaptation solutions.

Policy CP-1.1 Maintain and update the Climate Action Plan. Maintain and regularly update the City's Climate Action Plan to reduce greenhouse gas (GHG) emissions generated within the City. Ensure the City's GHG emission target is consistent with California's GHG reduction goals in order to be a qualified plan for California Environmental Quality Act (CEQA).

Policy CP-1.3 Utilize innovative technologies to reduce emissions. Utilize new technologies as they become available to reduce greenhouse gas (GHG) emissions by regularly evaluating new and emerging technology changes that can help to reduce GHG emissions, and by encouraging the use of such technology when it is demonstrated to be effective at reducing GHG emissions and a fiscally responsible investment.

Policy CP-1.4 Explore innovative pilot programs. Explore the potential for innovative greenhouse gas reduction pilot programs, including collaborations and partnerships, in each emissions sector (e.g., buildings and energy, transportation, solid waste, water, and carbon sequestration).

Policy CP-1.5 Seek funding to support greenhouse gas emissions reduction. Seek additional funding to support implementation of greenhouse gas reduction projects, exploring grant funding, rebates, and other incentive opportunities.

Policy CP-1.6 Community education about greenhouse gas reduction incentives. Educate residents and businesses about opportunities to reduce greenhouse gas emissions through grand funding, rebates, and other incentive opportunities.

Policy CP-2.1 Maintain Peninsula Clean Energy membership. Maintain City membership in Peninsula Clean Energy and continue to work to maintain a high level of private property owner participation in PCE.

Policy CP-2.2 Reduce emissions associated with natural gas infrastructure. Partner with the Pacific Gas and Electric Company to develop options for reducing greenhouse gas emissions associated with the existing natural gas grid.

Policy CP-2.2 Develop community solar projects. Explore the development of community solar projects.

Policy CP-2.4 Install energy resilience infrastructure. Provide energy resilience via backup energy systems, microgrids, and other measures that serve the community during emergency events, particularly supporting disadvantaged communities, including considering creating a financial incentive program for existing and new solar/battery backup system installations.

Policy CP-3.1 Building code maintenance for new and major renovations (energy efficiency). Regularly update South San Francisco's building codes to improve the energy performance of new construction and major remodels and to phase in requirements in predicable ways.

Policy CP-4.1 Establish efficiency upgrade programs. Establish an energy and water efficiency upgrade program for existing buildings, focusing resources on the most disadvantaged communities.

Policy CP-4.2 Prepare a Building Electrification Plan. Develop a date certain, phased-in Existing Building Electrification Plan to retrofit existing homes and businesses to all electric.

Policy CP-4.4 Community education about energy and water incentives. Educate residents and businesses on available incentive opportunities to reduce energy and water use.

Policy CP-5.1 Require minimum of LEED™ Silver rating or equivalent for new buildings. Require all new municipal buildings and facilities to meet a minimum LEED™ Silver rating as certified by the US Green Building Council or equivalent green building rating system. Require feasibility studies for zero-net-energy use, on-site renewable energy generation, and on-site batteries.

Policy CP-5.4 Require 75 percent waste diversion for municipal construction and demolition projects. Require municipal construction projects to achieve 75 percent waste diversion from the landfill.

Policy CP-5.5 Energy resilience of municipal buildings. Require municipal building and facility new construction and major renovation projects to evaluate the feasibility of incorporating on-site batteries that store electricity from on-site renewable energy generation to supply the building and community with electricity in the event of a disaster.

Policy CP-8.1 Evaluate system efficiency. Continuously evaluate and, as appropriate, replace systems at the wastewater treatment plant to reduce energy use.

Policy MOB-4.1 Increase substantially the proportion of travel using modes other than driving alone.

Policy MOB-4.2 Embrace innovation. Prepare the City for changes to transportation technology (such as autonomous vehicles and micro-mobility) and incorporate such innovations into projects when appropriate and where feasible.

Updated 2022 Climate Action Plan Actions

Action CE 1.1 Require the construction of any new nonresidential conditioned space of 5,000 square feet or more, or the conversion of unconditioned space 5,000 square feet or more, to meet a minimum of 50 percent of modeled building electricity needs with on-site renewable energy sources, as is feasible. To calculate 50 percent of building electricity needs for the new conditioned space, the applicant shall calculate building electricity use as part of the Title 24 compliance process. Total electricity use shall include total use for the new conditioned space excluding process energy.

Action CE 1.2 Establish a streamlined approval process for battery storage systems and reduce or eliminate permitting fees to encourage the addition of battery storage.

Action CE 1.3 Establish a streamlined PV system permitting and approval process to encourage the addition of solar PV systems.

Action CE 1.4 Provide energy resilience via backup energy systems, microgrids, and other measures that serve the community during emergency events, particularly supporting disadvantaged communities, including considering creating a financial incentive program for existing and new solar/battery backup system installations.

Action CE 1.6 Explore the opportunities to install community scale solar PV or other renewable energy systems including biogas to support local energy resiliency and provide renewable energy to disadvantaged communities.

Action CE 2.1 Maintain City membership in Peninsula Clean Energy and continue to work to maintain a minimum of 95 percent of private property owner participation in PCE.

Action BNC 1.1 Provide a combination of financial and development process incentives (e.g., expedited permitting, FAR increases, etc.) to encourage new development to exceed Title 24 energy efficiency standard.

Action BNC 2.1 Implement residential all-electric reach code and adopt all-electric reach code for nonresidential new construction. Exempt occupancies must install electric

building systems (e.g., space and water heating equipment) where feasible. Until the adoption of the nonresidential all-electric reach code, require any new nonresidential conditioned space of 5,000 square feet or more, or the conversion of unconditioned space 5,000 square feet or more to comply with CALGreen Tier 2 energy efficiency requirements to exceed mandatory energy efficiency requirements by 20 percent or more. For additions to existing development of 5,000 square feet or more, CALGreen Tier 2 shall be calculated as part of the Title 24 compliance process. Existing building space already permitted shall not be subject to CALGreen Tier 2 requirements.

Action BE 1.1 Encourage residential properties older than 10 years to provide an energy audit or EPA Home Energy Score at time of sale.

Action BE 1.2 Update zoning and building codes to require alternations or additions at least 50 percent the size of the original building to comply with minimum CALGreen requirements.

Action BE 1.3 Promote rebate programs for household appliances including those from Bay Area Air Quality Management District (BAAQMD).

Action BE 1.4 Work with Peninsula Clean Energy and San Mateo County Energy Upgrade to provide free to low-cost energy audits.

Action BE 1.5 Work with PG&E and PCE to implement deep retrofits in the existing building stock, focusing resources in the most disadvantaged communities.

Action BE 1.6 Adopt energy and water benchmarking ordinance for commercial buildings over 10,000 square feet to empower owners to control utility costs.

Action BE 1.7 Work with PG&E and PCE to implement retro-commissioning in the existing building stock.

Action BE 1.8 Work with PG&E and PCE to transition backup generators from diesel to carbon-free sources including battery storage systems.

Action BE 2.1 Develop a date certain, phased-in Existing Building Electrification Plan to retrofit 90 percent of existing homes and businesses to all electric by 2040.

Action BE 2.2 Require electric panel upgrades upon sale and/or rental turnover for single-family and low-rise residential.

Action BE 2.3 Require gas appliances (stove, clothes dryer, water heater) to be replaced with an electric alternative when they fail or reach the end of their useful life.

Action BE 2.4 Adopt an all-electric reach code for major renovations, alterations, additions.

Action TL 1.1 Implement EV reach code.

Action TL 1.2 Seek opportunities to install additional electric vehicle chargers at suitable public facilities, including Downtown parking structures and community and regional parks.

Action TL 2.2 Implement, monitor, and enforce compliance with the City's TDM Ordinance.

Action TL 2.3 Evaluate the current and best use of curb space in the City's activity centers and repurpose space to maximize people served (i.e., for loading, bikeways, bike parking, bus lanes, EV charging, or parklets).

Action TL 2.4 Incorporate maximum parking requirements for new residential and office/R&D projects.

Action TL 2.5 For all new land use and transportation projects, adhere to the City's VMT Analysis Guidelines and qualitatively assess the project's effect on multimodal access. Use the development review process to identify opportunities to enhance bicycle, pedestrian, and transit connectivity.

Action TL 2.6 Ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled. Develop a Capital Improvement Program (CIP) prioritization criteria, including equity considerations for SB 1000 neighborhoods, to strategically advance multimodal Complete Streets projects. All capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans.

Action TL 2.7 Develop a dedicated funding source or leverage private sector contributions to fund the South City shuttle and free bus service for South City residents.

Action TL 2.8 Leverage public-private partnerships to increase transit ridership and improve transit station access by incorporating first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.

Action TL 2.9 Continue collaboration with Caltrain, SamTrans, WETA, and shuttle providers to scale service levels in growing areas and leverage private sector subsidies of transit fares to support BART, Caltrain, SamTrans, and WETA ridership.

Action SW 1.1 Adopt an SB 1383 compliant zero-waste plan for municipal operations and the community that includes: mandatory residential and commercial recycling and collection of organics/food waste, mandatory commercial edible food recovery

program (per MOU with San Mateo County Office of Sustainability), and updated trash enclosure space and access requirements based on hauler recommendations to accommodate all waste streams (e.g., recycling, trash, and organics).

Action SW 1.2 Continue to work with SSF Scavenger to ensure implementation of waste reduction targets.

Action SW 1.3 Establish compliance pathways and enforcement mechanisms for mandatory organics and food waste diversion.

Action SW 1.4 Develop education and technical assistance programs to help all residents and businesses to compost and recycle.

Action SW 1.5 Explore modifying waste rate structures to encourage efficiency in future franchise agreements.

Action SW 1.6 Establish a green purchasing program for City of South San Francisco municipal operations.

Action WW 1.1 Achieve greater water use reductions than WELO by requiring all landscapes obtain a landscape permit, decreasing the size threshold to capture all landscape renovations, adding prescriptive irrigation plant lists, or water budget requirements.

Action WW 1.2 Explore options at the South San Francisco–San Bruno Water Quality Control Plant for delivering nonpotable, recycled water for cooling towers, processes, and irrigation in East of 101 (e.g., flow pipe water). Maximize available nonpotable water reuse from Orange Park Stormwater Capture project, at Orange Memorial Park, Centennial Way, and new Civic Campus.

Action WW 1.3 Create a streamlined permit process for laundry-to-landscape greywater systems.

Action WW 1.5 Partner with CalWater to install smart water meters throughout the City.

Action WW 2.1 Require high-efficiency fixtures in all new construction and major renovations, comparable to CALGreen Tier 1 or 2 standards.

Action CS 1.1 Explore compost application on available acres of appropriate open space.

Action CS 2.1 Expand the canopy cover to reach the goals of the Urban Forest Master Plan and increase environmental benefits, prioritizing disadvantaged communities and connected wildlife corridors.

Action CS 2.2 For nonresidential and residential new construction, require silva cell structures and soil compaction plan for tree growth, and require the preservation and addition of trees on private property in residential neighborhoods through design review where appropriate. Incorporate Parks and Recreation urban forest staff in the review process.

Action CS 3.1 Enhance Colma Creek as an ecological corridor, restoring 5 miles of creek ecologies and creating transitional habitat zones to build resilience and ecosystem services. Protect and expand existing marsh and wetland habitat to improve water quality, adapt to climate change, and provide habitat for wildlife.

Action CL 1.1 Require all new municipal buildings and facilities to meet a minimum LEED™ Silver standards as outlined by the US Green Building Council or equivalent green building rating system. Require feasibility studies for zero-net-energy use, on-site renewable energy generation, and on-site batteries.

Action CL 1.2 Regularly benchmark the environmental performance of municipal buildings, landscaping, parks and facilities, including energy and water use.

Action CL 1.3 To reduce operating and maintenance costs, use the benchmarking data to identify opportunities for environmental performance improvements through audits, retro-commissioning, and building efficiency and electrification retrofits.

Action CL 1.4 Require municipal construction projects to achieve 75 percent waste diversion from the landfill.

Action CL 1.5 Require municipal building and facility new construction and major renovation projects to evaluate the feasibility of incorporating on-site batteries that store electricity from on-site renewable energy generation to supply the building and community with electricity in the event of a disaster.

Action CL 1.6 Transition fleet vehicles from gasoline and diesel to ZEV (CNG, fuel cell, electric) as feasible ZEV alternatives become available and no later than 2040. Transition City owned and operated small gas engines (e.g., push mowers, trimmers, blowers etc.) to all electric by 2024 in line with State mandate.

Action CL 1.7 Adopt municipal TDM policy or participate in City ordinance that encourages alternatives to SOVs and established telecommute policy to allow remote work when feasible.

Action CL 2.1 Track and report progress toward achieving the City's greenhouse gas reduction goal.

Action CL 2.2 Update the community greenhouse gas inventory every five years.

Action CL 2.3 Prepare an inventory of emissions from municipal operations, establish a GHG reduction target, and develop a work plan to reduce municipal emissions to achieve carbon neutrality by 2045.

Action CL 2.4 Explore the potential for innovative greenhouse gas reduction pilot programs, including collaborations and partnerships, in each emissions sector (e.g., buildings and energy, transportation, solid waste, water, and carbon sequestration).

Action CL 2.5 Seek additional sources of funding to support implementation of greenhouse gas reduction projects, exploring grant funding, rebates, and other incentive opportunities.

Action CL 2.6 Educate residents and businesses about opportunities to reduce greenhouse gas emissions through grant funding, rebates, and other incentive opportunities. Establish an environmental interpretative program to raise awareness about environmental issues and climate adaptation throughout the City.

It should be noted that the above policies and actions are not specifically incorporated into the emissions estimates provided in this analysis due to the uncertainty of their widespread utility. In addition, the City adopted Ordinance 21-416 to amend Title 15, Buildings and Construction, to require all new single-family and low-rise multifamily residential development to be designed all-electric and new additions or major alterations constituting 50 percent of the building be designed all-electric, consistent with the updated 2022 CAP Action BNC 2.1. This ordinance will help reduce GHG emission generation in the City from new development, but it does not currently preclude mid-rise or high-rise residential development from utilizing natural gas infrastructure, nor does it currently preclude the use of natural gas infrastructure in nonresidential development or nonresidential occupancies in mixed use development. Moreover, Ordinance 21-416 contains exceptions that future eligible residential development may seek depending on the conditions, for instance, if there is no approved calculation method contained in the California Energy Code or if there is no commercially available technology for that specific building.

As detailed in Section 3.14, Transportation, with buildout of the proposed project, by 2040, the City is anticipated to have a total of 108,100 residents and 137,600 employees, resulting in a total service population of 245,700.

Table 3.7-3 shows the estimated GHG emissions generated from the entire City for the year 2040. It should be noted that Table 3.7-3 is based on current (year 2022) emission rates from area sources, energy usage, solid waste, water, and wastewater sources while the VMT data used to support this analysis utilizes a baseline year of 2019. Compliance with future State regulations would reduce related GHG emissions through the year 2040, such as SB 100 that requires 100 percent of in-state sales of electricity to be generated from zero-carbon emissions sources by 2045, which would result in reducing energy source emissions to near zero levels. In addition, the transportation sources only incorporate previously adopted State regulations and do not account for recent State regulations and goals, including the anticipated reductions from Executive Order N-79-20 that established a goal

of 100 percent of new passenger vehicles sold in California to be zero-emissions by 2035. The proposed GHG emission reduction policies and actions included in the proposed project would further reduce the GHG emissions shown in Table 3.7-3.[70]

As illustrated in Table 3.7-3 and contained in the modeling outputs and supporting calculations provided in Appendix B, the City is estimated to generate approximately 872,000 MT CO_2e per year in 2040 with a service population (residents and employees) of an estimated 245,700 people. As such, citywide GHG emissions per service population are projected to be 3.55 MT CO_2e in 2040 with implementation of future development facilitated by the proposed project. The GHG emissions per service population for the proposed project buildout conditions would not exceed the 4.0 MT CO_2e per service population threshold that is detailed above in Section 3.7.5, Thresholds of Significance. The threshold was calculated based on plan-level GHG emissions thresholds recommended in the ARB's current Scoping Plan and represents the rate of emission reductions necessary for the City to achieve a fair share of Statewide GHG reductions necessary to meet the State's long-term GHG reduction targets.

Table 3.7-3: Citywide GHG Emissions Forecast at Proposed Project Buildout

Source Category	Citywide Emissions with Proposed Project Buildout (MT CO_2e)
Area Sources	2,885.56
Energy Usage	159,459.99
Transportation	653,016.93
Solid Waste	39,635.04
Water and Wastewater	22,016.45
Annual Total	**871,983.97**
Service Population (Population + Jobs)	245,700
Emissions Per Service Population	3.55
Threshold	4.0
Threshold Exceeded?	**No**

Notes:
MT = metric tons
CO_2e = carbon dioxide equivalent
Source: CalEEMod Version 2020.4.0 and EMFAC 2021 (see Appendix B).

As illustrated in Table 3.7-3, the proposed project would result in annual per service population GHG emissions of 3.55 MT CO_2e, which is below the established significance threshold of 4.0 MT CO_2e per service population. As such, this impact would be less than significant.

[70] The modeled square footage for existing and proposed project conditions is based on Section 2, Table 2-7. The mobile emissions estimates are based on VMT data provided by Fehr & Peers for proposed project (2040) conditions.

Qualified Climate Action Plan

As previously discussed, the updated 2022 CAP included as part of the proposed project is intended to establish an analytical pathway for future development projects facilitated by the proposed project under CEQA Section 15183.5(b). CEQA Guidelines Section 15183.5(b) allows projects and plans to be analyzed through a streamlined or tiered approach utilizing an adopted Greenhouse Gas Reduction Plan. According CEQA Guidelines Section 15183.5(b), for a Greenhouse Gas Reduction Plan to be considered a "qualified" reduction strategy capable of being utilized for a streamlined or tiered analysis under CEQA must complete the following requirements:[71]

- Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendments if the plan is not achieving specified levels; and
- Be adopted in a public process following environmental review.

As discussed in Chapter 3 of the updated 2022 CAP, GHG emissions are quantified for both existing and projected conditions over a specified time, through the planning horizon year of 2040, and those emissions quantified are specific to the City of South San Francisco with and without incorporation of identified reduction measures and strategies in the updated 2022 CAP. The updated 2022 CAP further establishes the long-term goal of an 80 percent reduction from 1990 levels by 2050 as the foundation for determining what would constitute cumulatively considerable GHG contributions to global climate change. Implementation and monitoring are key components of the updated 2022 CAP. Chapter 5 of the updated 2022 CAP establishes a monitoring program and implementation strategy for the CAP measures. The City's Chief Sustainability Officer will prepare annual progress reports on CAP implementation to be presented to City Council, Planning Commission, and other stakeholders to ensure that the City is successful in reaching these identified reduction targets. The monitoring report will include implementation status of each action and progress toward achieving the performance targets of the corresponding emissions reduction measure. The annual monitoring report will also include information on any new efforts that may become applicable. The City will update the community and municipal GHG inventory every 3 to 5 years.

[71] Association of Environmental Professionals (AEP). 2022. 2022 CEQA California Environmental Quality Act Statute and Guidelines.

Moreover, Action CP-1.1.1 of the General Plan Update would require the City to update the reduction measures contained in the updated CAP every 3 to 5 years, and Policy CP-1.2 of the General Plan Update would require the City to monitor and track progress toward the State's long-term climate goal of carbon neutrality by 2045.

Finally, this Draft Program EIR presents the environmental review and subsequent public review process which would qualify the updated 2022 CAP under CEQA Guidelines Section 15183.5(b). As such, should this Draft Program EIR be certified and the proposed project adopted, the updated 2022 CAP would be considered a qualified GHG reduction strategy under CEQA Guidelines Section 15183.5(b)(1).

Level of Significance

Less than significant impact.

Conflict With Plan, Policy, or Regulation That Reduces Emissions

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

ARB Climate Change Scoping Plan

In the 2017 Climate Change Scoping Plan, the ARB recommends local plan-level targets of no more than 6.0 MT CO_2e per capita by 2030 and no more than 2.0 MT CO_2e per capita by 2050. Based on a linear interpolation of these two GHG reduction goals, the proposed target for the proposed project would be no more than 4.0 MT CO_2e per service population by 2040.

Table 3.7-3 quantifies operational GHG emissions from implementation of the proposed project, as adjusted to reflect reductions of emissions that are expected to occur from implementation of the Renewable Portfolio Standard, most current Title 24 building energy use standards, reduction in lighting (AB 1109), Light and Heavy-Duty Vehicle Regulation, adoption of Complete Streets standards, and improvements to public transit and ridesharing programs. As identified in Table 3.7-3, the City is projected to emit 3.55 MT CO_2e per service population in 2040. As such, the City is projected to achieve the GHG reduction target numbers provided in the 2017 Climate Change Scoping Plan.

The General Plan Update contains the following policies and actions to support the State's climate goals. Policy CP-4.2 directs the City to prepare a Building Electrification Plan to retrofit existing homes and business to all electric. Policy CP-5.1 requires new buildings to meet a minimum LEED™ Silver rating or equivalent and requires feasibility studies for net zero energy use, on-site renewable energy generation, and on-site batteries. In addition, the 2019 California Code of Regulations Title 24 Part 6 standards also now require that all homes built in California shall have zero-net-energy use, which is achieved through energy efficiency measures as well as required rooftop solar photovoltaic systems. The 2019 California Code of Regulations Title 24 Part 6 standards also apply to nonresidential developments and require a variety of energy efficiency measures to be implemented during construction of the structures to reduce energy as usage as well as air emissions.

As described above, the General Plan Update and updated 2022 CAP include GHG reduction actions similar to those recommended in the 2017 Climate Change Scoping Plan. Future projects would be required to comply with State standards for new construction as well as policies and actions of the General Plan Update and updated 2022 CAP that aim to reduce GHG emissions. Therefore, development facilitated by the proposed project would not conflict with the 2017 Climate Change Scoping Plan.

Plan Bay Area 2050: Strategy for a Sustainable Region

To achieve the ABAG and MTC sustainable vision for the San Francisco Bay Area, the Plan Bay Area 2050 land use concept plan concentrates most new population and employment growth in and around Priority Development Areas (PDAs). Under this Plan, PDAs are described as transit-oriented, infill development opportunity areas within existing communities. Two-thirds of all regional growth by 2040 is allocated within PDAs. The PDAs are also expected to accommodate 80 percent (or over 525,570 units) of new housing and 66 percent (or about 744,230) of new jobs. The City of South San Francisco is located within the North San Mateo County Super District that is forecasted to have an increase of 69,000 households between the baseline year of 2015 and the proposed plan year of 2050. Buildout of the proposed 2040 General Plan could yield up to 17,153 new residential units (based on 2019 baseline data from Fehr & Peers). As such, the proposed project would promote implementation of the Plan Bay Area 2050. In addition, the policies and actions of the General Plan Update encourage the use of alternative modes of travel and reduce dependence on auto use, consistent with Plan Bay Area's vision.

Moreover, the proposed project contains several policies and actions which would support the policy strategies related to GHG emissions contained in Plan Bay Area 2050. As shown in Table 3.7-4, the proposed project would be consistent with the policy strategies contained in Plan Bay Area 2050. It should be noted that only GHG-related strategies from Plan Bay Area 2050 are included below.

Table 3.7-4: Proposed Project Consistency With Plan Bay Area 2050

Plan Bay Area 2050 Policy Strategy	Consistent with Strategy?	Discussion
H3. Allow a greater mix of housing densities and types in Growth Geographies: Allow a variety of housing types at a range of densities to be built in Priority Development Areas, select Transit-Rich Areas and select High-Resources Areas.	Yes	The proposed project would include several policies that would support this strategy to encourage transit-oriented development and reduce residents' dependence on vehicular travel. The General Plan Update includes the following policies: **Policy LU-2.1:** Prioritize development near transit centers. Collaborate with developers and property owners to locate new housing, mixed use, and employment uses near transit centers to minimize reliance on personal automobiles. **Policy LU-3.1:** Create affordable and workforce housing. Actively facilitate adding affordable and

Plan Bay Area 2050 Policy Strategy	Consistent with Strategy?	Discussion
		workforce housing in all South San Francisco neighborhoods equitably **Policy: LU-3.3:** Encourage diversity of housing types. Encourage a variety of housing types to be developed at a range of densities to equitably serve varying household types, including, but not limited to, single-family attached and detached, accessory dwelling units, multi-family apartments, townhomes, duplexes, triplexes, quadplexes, and condominiums. **Policy LU-3.6:** Facilitate housing for all needs. Facilitate housing for seniors, special needs groups, including the developmentally disabled, and nontraditional family groups by requiring a diverse range of housing configurations that are Americans with Disabilities Act (ADA) compliant and flexible.
EC4. Allow greater commercial densities in Growth Geographies: Allow greater densities for new commercial development in select Priority Development Areas and Transit-Rich Areas to encourage more jobs to locate near public transit.	Yes	The General Plan Update includes the following policies related to commercial development: **Policy LU-1.1:** Support mixed use activity centers. Support a network of vibrant mixed use activity centers located throughout the City. Mixed use centers should include business and services, housing, healthy food, parks, and other gathering places. **Policy LU-2.1:** Prioritize development near transit centers. Collaborate with developers and property owners to locate new housing, mixed use, and employment uses near transit centers to minimize reliance on personal automobiles. **Policy LU-4.3:** Promote complete neighborhoods by allowing some commercial uses in residential neighborhoods. Locate new commercial uses in existing residential neighborhoods on connector and boulevard street types and/or at key neighborhood street intersections to promote complete neighborhoods. Encourage and support home businesses. **Policy LU-7.1:** Promote complete neighborhoods. Promote new commercial uses and revitalize existing commercial areas in locations that provide convenient access to a range of goods and services. **Policy: LU-7.2:** Concentrate neighborhood-serving commercial. Allow existing strip commercial corridors like El Camino Real to intensify with stand-alone residential uses and concentrate

Plan Bay Area 2050 Policy Strategy	Consistent with Strategy?	Discussion
		neighborhood-serving commercial uses into mixed use activity centers. **Policy LU-7.4:** Intensify low-density strip commercial and shopping centers. Intensify low-density strip commercial and shopping centers into mixed use activity centers that are accessible to transit options.
EC5. Provide incentives to employers to shift jobs to housing-rich areas well served by transit: Provide subsidies to encourage employers to relocate offices to housing-rich areas near regional rail stations.	Yes	The General Plan Update includes the following policies to incentivize jobs near housing-rich areas: **Policy LU-2.1:** Prioritize development near transit centers. Collaborate with developers and property owners to locate new housing, mixed use, and employment uses near transit centers to minimize reliance on personal automobiles. **Policy LU-3.5:** Facilitate live/work housing. Provide opportunities for live/work options to support a creative economy and meet the changing needs of workspaces.
T8. Build a Complete Streets network: Enhance streets to promote walking, biking and other micro-mobility through sidewalk improvements, car-free slow streets, and 10,000 miles of bike lanes or multiuse paths.	Yes	The General Plan Update includes the following policies to promote Complete Streets and alternative transportation: **Policy LU-1.2:** Connectivity in complete neighborhoods. Improve walk, bike, and accessibility in complete neighborhoods. **Policy MOB-2.1:** Incorporate Complete Streets improvements into all roadway and development projects. **Policy MOB-2.2:** Advance more equitable transportation within South San Francisco. **Policy MOB-5.1:** Expand the low-stress bike and pedestrian network. Capitalize on opportunities to expand the low-stress bike and pedestrian network throughout the City. **Policy MOB-5.2:** Enhance access to the trail network. Enhance access to Centennial Way Trail, Bay Trail, and other trail facilities through streetscape projects and new developments. The updated 2022 CAP includes the following action to promote Complete Streets and alternative transportation:

Plan Bay Area 2050 Policy Strategy	Consistent with Strategy?	Discussion
		TL 2.6 Complete Streets Policy. Ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled. Develop a Capital Improvement Program (CIP) prioritization criteria, including equity considerations for SB 1000 neighborhoods, to strategically advance multimodal Complete Streets projects. All capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans.
T10. Enhance local transit frequency, capacity and reliability: Improve the quality and availability of local bus and light rail service, with new bus rapid transit lines, South Bay light rail extensions, and frequency increases focused in lower-income communities.	Yes	The General Plan Update includes the following policy to improve local transit quality: **Policy MOB-4.1:** Increase substantially the proportion of travel using modes other than driving alone. The updated 2022 CAP includes the following actions to improve local transit quality: **TL 2.5 Development along Transit Corridors.** For all new land use and transportation projects, adhere to the City's VMT Analysis Guidelines and qualitatively assess the project's effect on multimodal access. Use the development review process to identify opportunities to enhance bicycle, pedestrian, and transit connectivity. **TL 2.7 Free Local Bus Service.** Develop a dedicated funding source or leverage private sector contributions to fund the South City shuttle and free bus service for South City residents. **TL 2.8 Improve Transit Station Access.** Leverage public-private partnerships to increase transit ridership and improve transit station access by incorporating first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.
T11. Expand and modernize the regional rail network: Better connect communities while increasing frequencies by advancing the Link21 new transbay rail crossing, BART to	Yes	The General Plan Update includes the following policies to expand regional rail: **Policy LU-2.1:** Prioritize development near transit centers. Collaborate with developers and property

Plan Bay Area 2050 Policy Strategy	Consistent with Strategy?	Discussion
Silicon Valley Phase 2, Valley Link, Caltrain Downtown Rail Extension and Caltrain/High-Speed Rail grade separations, among other projects.		owners to locate new housing, mixed use, and employment uses near transit centers to minimize reliance on personal automobiles. **Policy MOB-4.1:** Increase substantially the proportion of travel using modes other than driving alone The updated 2022 CAP includes the following actions to expand regional rail: **TL 2.5 Development along Transit Corridors.** For all new land use and transportation projects, adhere to the City's VMT Analysis Guidelines and qualitatively assess the project's effect on multimodal access. Use the development review process to identify opportunities to enhance bicycle, pedestrian, and transit connectivity. **TL 2.8 Improve Transit Station Access.** Leverage public-private partnerships to increase transit ridership and improve transit station access by incorporating first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.
T12. Build an integrated regional express lanes and express bus network: Complete the buildout of the regional express lanes network to provide uncongested freeway lanes for new and improved express bus services, carpools, and toll-paying solo drivers.	Yes	The General Plan Update includes the following policy to complete regional express lanes and express bus networks: **Policy MOB-4.1:** Increase substantially the proportion of travel using modes other than driving alone. The updated 2022 CAP includes the following actions to complete regional express lanes and express bus networks: **TL 2.5 Development along Transit Corridors.** For all new land use and transportation projects, adhere to the City's VMT Analysis Guidelines and qualitatively assess the project's effect on multimodal access. Use the development review process to identify opportunities to enhance bicycle, pedestrian, and transit connectivity. **TL 2.7 Free Local Bus Service.** Develop a dedicated funding source or leverage private sector contributions to fund the South City shuttle and free bus service for South City residents. **TL 2.8 Improve Transit Station Access.** Leverage

Plan Bay Area 2050 Policy Strategy	Consistent with Strategy?	Discussion
		public-private partnerships to increase transit ridership and improve transit station access by incorporating first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.
EN3. Fund energy upgrades to enable carbon neutrality in all existing commercial and public buildings: Support electrification and resilient power system upgrades in all public and commercial buildings.	Yes	The General Plan Update includes the following policies related to energy efficiency upgrades and electrification of public and commercial buildings: **Policy CP-3.1**. Building code maintenance for new and major renovations (energy efficiency). Regularly update South San Francisco's building codes to improve the energy performance of new construction and major remodels and to phase in requirements in predicable ways. **Policy CP-4.1.** Establish efficiency upgrade programs. Establish an energy and water efficiency upgrade program for existing buildings, focusing resources on the most disadvantaged communities. **Policy CP-5.5**. Energy resilience of municipal buildings. Require municipal building and facility new construction and major renovation projects to evaluate the feasibility of incorporating on-site batteries that store electricity from on-site renewable energy generation to supply the building and community with electricity in the event of a disaster. **Policy CR-6.1.** Support resilient building design. Support resilient building design by helping residents weatherize homes to keep them cooler and more energy efficient and to improve indoor air quality. **Policy ECS-4.3.** Identify reductions to long term operations and maintenance costs. Identify ways to reduce the City's long-term operations and maintenance costs, such as adapting more energy efficient technologies for facilities, using low water landscape palettes, and using recycled water for irrigation. Reinvest these future savings into additional equitable community services. **Policy SA-28.5.** Require sustainable and environmentally sensitive design. Incorporate sustainable and environmentally sensitive design and equipment, energy conservation features, water conservation measures and drought-tolerant or equivalent landscaping, and sustainable stormwater

Plan Bay Area 2050 Policy Strategy	Consistent with Strategy?	Discussion
		management features. The updated 2022 CAP includes the following actions related to energy efficiency upgrades and electrification of public and commercial buildings: **CE 1.1**. Adopt solar reach code for nonresidential buildings. Require the construction of any new nonresidential conditioned space of 5,000 square feet or more, or the conversion of unconditioned space 5,000 square feet or more, to meet a minimum of 50 percent of modeled building electricity needs with on-site renewable energy sources, as is feasible. **BNC 1.1.** Improve the energy efficiency of new construction. Provide a combination of financial and development process incentives (e.g., Expedited permitting, FAR increases, etc.) to encourage new development to exceed Title 24 energy efficiency standard. **BNC 2.1.** Adopt an all-electric reach code for nonresidential new construction. Implement residential all-electric reach code and adopt all-electric reach code for nonresidential new construction. **BE 1.2.** Require major renovations to meet CALGreen standards. Update zoning and building codes to require alternations or additions at least 50 percent the size of the original building to comply with minimum CALGreen requirements. **BE 1.5.** Deep energy retrofits. Work with PG&E and PCE to implement deep retrofits in the existing building stock, focusing resources in the most disadvantaged communities. **BE 1.8.** Transition to carbon-free backup power. Work with PG&E and PCE to transition backup generators from diesel to carbon-free sources including battery storage systems. **BE 2.1.** Existing Building Electrification Plan. Develop a date certain, phased-in Existing Building Electrification Plan to retrofit 90 percent of existing homes and businesses to all electric by 2040. **BE 2.4.** All electric major renovations. Adopt an all-electric reach code for major renovations, alterations, additions.

Plan Bay Area 2050 Policy Strategy	Consistent with Strategy?	Discussion
		TL 1.2. Electric Vehicle Chargers at Municipal Facilities. Seek opportunities to install additional electric vehicle chargers at suitable public facilities, including Downtown parking structures and community and regional parks.
EN7. Expand commute trip reduction programs at major employers: Set a sustainable commute target for major employers as part of an expanded Bay Area Commuter Benefits Program, with employers responsible for funding incentives and disincentives to shift auto commuters to any combination of telecommuting, transit, walking and/or bicycling.	Yes	The General Plan Update includes the following policies related to expanding commuter trip reduction programs: **Policy MOB-3.1:** Promote mode shift among employers. Manage the number of vehicle trips, with a focus on promoting mode shift among employers. **Policy MOB-4.1:** Increase substantially the proportion of travel using modes other than driving alone. The updated 2022 CAP includes the following action related to expanding commuter trip reduction programs: **TL 2.2 TDM Program.** Implement, monitor, and enforce compliance with the City's TDM Ordinance.
EN8. Expand clean vehicle initiatives: Expand investments in clean vehicles, including more fuel-efficient vehicles and electric vehicle subsidies and chargers.	Yes	The General Plan Update includes the following policies related to clean vehicle initiatives: **Policy PR-7.11:** Install electric vehicle parking at City parks and facilities. Install electric vehicle charging infrastructure at City-owned parks and facilities. **Policy CP-3.4:** Adopt Electric Vehicle charging reach code. Adopt higher electric vehicle charging requirements than CALGreen for multi-family and nonresidential new construction. The updated 2022 CAP includes the following actions related to clean vehicle initiatives: **TL 1.1** Electric Vehicle Charging Reach Code. Implement EV reach code. **TL 1.2** Electric Vehicle Chargers at Municipal Facilities. Seek opportunities to install additional electric vehicle chargers at suitable public facilities, including Downtown parking structures and community and regional parks.
EN9. Expand transportation demand management initiatives: Expand investments in programs like	Yes	The General Plan Update includes the following policies related to transportation demand initiatives:

Plan Bay Area 2050 Policy Strategy	Consistent with Strategy?	Discussion
vanpools, bikeshare, carshare and parking fees to discourage solo driving.		**Policy MOB-4.1:** Increase substantially the proportion of travel using modes other than driving alone. **Policy LU-1.2:** Connectivity in complete neighborhoods. Improve walk, bike, and accessibility in complete neighborhoods. **Policy MOB-2.1:** Incorporate Complete Streets improvements into all roadway and development projects. **Policy MOB-2.2:** Advance more equitable transportation within South San Francisco. **Policy MOB-5.1:** Expand the low-stress bike and pedestrian network. Capitalize on opportunities to expand the low-stress bike and pedestrian network throughout the City. The updated 2022 CAP includes the following actions related to transportation demand initiatives: **TL 2.1 Trip CAP on East of 101.** Implement an East of 101 area trip cap with triennial monitoring and corrective actions if exceeded to manage the number of vehicles entering the area. **TL 2.2 TDM Program.** Implement, monitor, and enforce compliance with the City's TDM Ordinance.
Source: Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). 2021. Draft Plan Bay Area 2050.		

As described above, the General Plan Update and updated 2022 CAP include GHG reduction actions which are consistent with the Plan Bay Area 2050 GHG-related policy strategies. Future projects would be required to comply with State standards for new construction as well as policies and actions of the General Plan Update and updated 2022 CAP that aim to reduce GHG emissions. Therefore, development facilitated by the proposed project would not conflict with the Plan Bay Area 2050.

Bay Area Air Quality Management District 2017 Clean Air Plan

The BAAQMD 2017 Clean Air Plan contains control measures the focus primarily on reducing GHG emissions across the following sectors: stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and super-GHG pollutants. Table 3.7-5 identifies the control measures from the 2017 Clean Air Plan that are relevant to the City and the proposed project's consistency with those measures.

Table 3.7-5: Proposed Project Consistency With 2017 Clean Air Plan

2017 Bay Area Clean Air Plan Control Measure	Consistent with Control Measure?	Discussion
TR2 (Trip Reduction Programs): Encourage trip reduction policies and programs in local plans, e.g., general and specific plans while providing grants to support trip reduction efforts. Encourage local governments to require mitigation of vehicle travel as part of new development approval, to adopt transit benefits ordinances in order to reduce transit costs to employees, and to develop innovative ways to encourage rideshare, transit, cycling, and walking for work trips.	Yes	The General Plan Update includes the following policies to reduce vehicle miles traveled: **Policy LU-2.5:** Encourage shared parking in neighborhoods. Encourage shared parking and park once strategies to minimize parking demand and reduce vehicle trips. Locate parking behind commercial buildings. **Policy MOB-3.1.** Promote mode shift among employers. Manage the number of vehicle trips, with a focus on promoting mode shift among employers. **Policy MOB-3.2.** Optimize traffic operations on City streets. Optimize traffic operations on City streets while avoiding widening roadways or otherwise pursuing traffic operations changes at expense of multimodal safety, transit reliability, or bicycle and pedestrian comfort. **Policy MOB-4.1.** Increase substantially the proportion of travel using modes other than driving alone. **Policy MOB-4.2.** Embrace innovation. Prepare the City for changes to transportation technology (such as autonomous vehicles and micro-mobility) and incorporate such innovations into projects when appropriate and where feasible. The updated 2022 CAP includes the following actions to reduce vehicle miles traveled: **Action TL 2.2:** Implement, monitor, and enforce compliance with the City's TDM Ordinance.
TR9 (Bicycle and Pedestrian Access Facilities): Encourage planning for bicycle and pedestrian facilities in local plans, e.g., general and specific plans, fund bike lanes, routes, paths and bicycle parking facilities.	Yes	The General Plan Update includes the following policies related to bicycle and pedestrian facilities: **Policy LU-2.3:** Develop connected transit-oriented communities. Develop strong pedestrian, shuttle, and bicycle connections to and/from transit via pedestrian-oriented building design, creating safe and convenient road crossings, and providing street furniture and amenities. **Policy LU-4.4:** Improve pedestrian and bicycle connectivity in residential neighborhoods. Link

2017 Bay Area Clean Air Plan Control Measure	Consistent with Control Measure?	Discussion
		existing residential neighborhoods by providing convenient pedestrian and bicycle connections to nearby destinations, such as parks, public facilities, and shopping centers. **Policy LU-7.5:** Foster pedestrian and bicycle access in neighborhood commercial development. Require new commercial development to foster pedestrian and bicycle access by minimizing building setbacks from the sidewalk, providing safe, accessible pedestrian connections, and creating secure and convenient bike storage. **Policy LU-8.3:** Improve pedestrian connections and sidewalks. Improve pedestrian connections and sidewalk infrastructure across the City, especially between residential and commercial areas, keeping in mind mobility needs of children, families, seniors, and people with disabilities. The updated 2022 CAP includes the following actions related to bicycle and pedestrian facilities: **Action TL 2.6:** Ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled. Develop a Capital Improvement Program (CIP) prioritization criteria, including equity considerations for SB 1000 neighborhoods, to strategically advance multimodal Complete Streets projects. All capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans.
EN2 (Decrease Electricity Demand): Work with local governments to adopt additional energy efficiency policies and programs. Support local government energy efficiency program via best practices, model ordinances, and technical support. Work with partners to develop messaging to decrease electricity demand during peak times.	Yes	The General Plan Update includes the following policies to decrease electricity demand: **Policy CP-3.1:** Building code maintenance for new and major renovations (energy efficiency). Regularly update South San Francisco's building codes to improve the energy performance of new construction and major remodels. **Policy CP-5.1:** Require minimum of LEED™ Silver rating or equivalent for new buildings. Require all new municipal buildings and facilities to meet a

2017 Bay Area Clean Air Plan Control Measure	Consistent with Control Measure?	Discussion
		minimum LEED™ Silver rating as certified by the US Green Building Council or equivalent green building rating system. Require feasibility studies for zero-net-energy use, on-site renewable energy generation, and on-site batteries. **Policy CP-5.5:** Energy resilience of municipal buildings. Require municipal building and facility new construction and major renovation projects to evaluate the feasibility of incorporating on-site batteries that store electricity from on-site renewable energy generation to supply the building and community with electricity in the event of a disaster. The updated 2022 CAP includes the following actions to decrease electricity demand: **Action CE 1.1:** Adopt solar reach code for nonresidential buildings. Require the construction of any new nonresidential conditioned space of 5,000 square feet or more, or the conversion of unconditioned space 5,000 square feet or more, to meet a minimum of 50 percent of modeled building electricity needs with on-site renewable energy sources, as is feasible. To calculate 50 percent of building electricity needs for the new conditioned space, the applicant shall calculate building electricity use as part of the Title 24 compliance process. Total electricity use shall include total use for the new conditioned space excluding process energy. **Action CE 1.3:** Streamline PV system permitting and approval. Establish a streamlined PV system permitting and approval process to encourage the addition of solar PV systems. **Action CE 1.6:** Explore community scale solar and other renewable energy implementation. Explore the opportunities to install community scale solar PV or other renewable energy systems including biogas to support local energy resiliency and provide renewable energy to disadvantaged communities. **Action BNC 1.1:** Improve the energy efficiency of new construction. Provide a combination of financial and development process incentives (e.g., Expedited permitting, FAR increases, etc.) to encourage new development to exceed Title 24 energy efficiency

2017 Bay Area Clean Air Plan Control Measure	Consistent with Control Measure?	Discussion
		standard. **Action BNC 1.2:** Adopt an all-electric reach code for nonresidential new construction. Implement residential all-electric reach code and adopt all-electric reach code for nonresidential new construction. Exempt occupancies must install electric building systems (e.g., space and water heating equipment) where feasible. Until the adoption of the nonresidential all-electric reach code, require any new nonresidential conditioned space of 5,000 square feet or more, or the conversion of unconditioned space 5,000 square feet or more to comply with CALGreen Tier 2 energy efficiency requirements to exceed mandatory energy efficiency requirements by 20 percent or more. For additions to existing development of 5,000 square feet or more, CALGreen Tier 2 shall be calculated as part of the Title 24 compliance process. Existing building space already permitted shall not be subject to CALGreen Tier 2 requirements.
BL4 (Urban Heat Island Mitigation): Develop and urge adoption of a model ordinance for "cool parking" that promotes the use of cool surface treatments for new parking facilities, as well existing surface lots undergoing resurfacing. Develop and promote adoption of model building code requirements for new construction or re-roofing/roofing upgrades for commercial and residential multi-family housing. Collaborate with expert partners to perform outreach to cities and counties to make them aware of cool roofing and cool paving techniques, and of new tools available.	Yes	The Municipal Code includes the following policy to decrease urban heat islands: **Chapter 15.26 of the Municipal Code** adopts the 2019 California Energy Code, Title 24, Part 6 of the California Code of Regulations. Cool roofs became part of the requirements of the California Energy Code in October 2005. The updated 2022 CAP includes the following actions to decrease urban heat island: **Action CS 2.1:** Public Tree Planting. Expand canopy cover to reach the goals of the Urban Forest Master Plan and increase environmental benefits, prioritizing disadvantaged communities and connected wildlife corridors. New trees will capture carbon, help to reduce the urban head island effect, make walking and biking more pleasant on hot days, and improve local air quality; all of which improve public health and wellbeing.
NW2 (Urban Tree Planting): Develop or identify an existing model municipal tree planting ordinance and encourage local governments to adopt such an ordinance. Include tree planting recommendations the Air	Yes	The General Plan Update and Municipal Code includes the following policies to develop or identify an existing model municipal tree planting ordinance and encourage local governments to adopt such an ordinance:

2017 Bay Area Clean Air Plan Control Measure	Consistent with Control Measure?	Discussion
District's technical guidance, best practices for local plans and CEQA review.		**Policy CP-7.2:** Expand tree canopy cover. Expand the canopy cover to increase environmental benefits, prioritizing disadvantaged communities and connected wildlife corridors. **Policy ES-4.3:** Support the staged succession of tree planting. Plan in advance to remove and replant trees to guide tree planting priorities and help shape the character of the City. **Policy ES-4.4:** Plan for tree planting to promote tree health. Plan for trees before planting to promote the health and longevity of individual trees, reduce mortality/tree removals, and improve habitat for wildlife. Establish a design standard for minimum soil depth to facilitate robust tree growth. **Policy ES-5.5:** Plant using a multi-layered cluster to support wildlife. Design plantings in multi-layered clusters, placing groundcover, shrub, and tree canopy layers in the same area to support wildlife. **Chapter 13.30 of the Municipal Code** provides standards and requirements for the protection of certain large trees and trees with unique characteristics; provides standards and requirements for planting and maintenance of trees for new development; and establishes recommended standards for planting and maintaining trees on property that is already developed. The updated 2022 CAP includes the following actions to increase tree planting: **Action CS 2.1:** Public Tree Planting. Expand canopy cover to reach the goals of the Urban Forest Master Plan and increase environmental benefits, prioritizing disadvantaged communities and connected wildlife corridors. New trees will capture carbon, help to reduce the urban head island effect, make walking and biking more pleasant on hot days, and improve local air quality; all of which improve public health and wellbeing.
WA3 (Green Waste Diversion): Develop model policies to facilitate local adoption of ordinances and programs to reduce the amount of green waste going to landfills.	Yes	The General Plan Update includes the following policy to reduce the amount of green waste going to landfills: **Policy CP-6.1:** Maintain and update Waste Reduction

2017 Bay Area Clean Air Plan Control Measure	Consistent with Control Measure?	Discussion
		Plan. Maintain and regularly update the City's waste reduction plans and programs to ensure consistency with California's waste reduction goals.
WA4 (Recycling and Waste Reduction): Develop or identify and promote model ordinances on communitywide zero-waste goals and recycling of construction and demolition materials in commercial and public construction projects.	Yes	The General Plan Update includes the following policy to reduce the amount of construction and demolition materials: **Policy CP-5.4:** Require 75 percent waste diversion for municipal construction and demolition projects. Require municipal construction projects to achieve 75 percent waste diversion from the landfill. The updated 2022 CAP includes the following action to reduce the amount of waste: **Action SW 1.1:** Adopt an SB 1383 compliant zero-waste plan for municipal operations and the community that includes: mandatory residential and commercial recycling and collection of organics/food waste, mandatory commercial edible food recovery program (per MOU with San Mateo County Office of Sustainability), and updated trash enclosure space and access requirements based on hauler recommendations to accommodate all waste streams (e.g., recycling, trash, and organics).
WR2 (Support Water Conservation): WA4 (Recycling and Waste Reduction): Develop or identify and promote model ordinances on communitywide zero-waste goals and recycling of construction and demolition materials in commercial and public construction projects.	Yes	The General Plan Update includes the following policies related to water conservation: **Policy ES-5.8:** Design irrigation systems for water conservation. Install weather- or soil moisture-based irrigation controllers in all new development. Cluster plants together with similar water requirements to conserve water. Use the Water Use Classification of Landscape Species (WUCOLS) ratings to establish watering needs. **Policy SA-28.5:** Require sustainable and environmentally sensitive design. Incorporate sustainable and environmentally sensitive design and equipment, energy conservation features, water conservation measures and drought-tolerant or equivalent landscaping, and sustainable stormwater management features. The updated 2022 CAP includes the following actions related to water conservation: **Action WW 1.1:** Landscaping Water Requirements. Achieve greater water use reductions than WELO by

2017 Bay Area Clean Air Plan Control Measure	Consistent with Control Measure?	Discussion
		requiring all landscapes obtain a landscape permit, decreasing the size threshold to capture all landscape renovations, adding prescriptive irrigation plant lists, or water budget requirements. **Action WW 2.1:** Indoor Water Efficiency Standards. Require high-efficiency fixtures in all new construction and major renovations, comparable to CALGreen Tier 1 or 2 standards. The Municipal Code and Zoning Ordinance contain the following regulations to support water conservation: **Section 14.04.134** (Low Impact Development [LID] requirements) states that all regulated projects shall implement LID requirements as specified in National Pollutant Discharge Elimination System (NPDES) Permit No. CAS612008 to reduce runoff and mimic a site's predevelopment hydrology. **Section 20.300.007** (Landscaping) (revised) includes a number of requirements for new construction or rehabilitated landscapes to aid in energy conservation by providing shade from the sun and shelter from the wind and encourage the conservation of water resources through the use of native and drought-tolerant plans and water-conserving irrigation practices.
Source: Bay Area Air Quality Management District (BAAQMD). 2017 Clean Air Plan. Adopted April 19, 2017.		

As demonstrated by Table 3.7-5, the proposed project is consistent with the applicable control measures of the 2017 Clean Air Plan. Future projects would be required to comply with requirements of the General Plan Update, updated 2022 CAP, and the City's Municipal Code and Zoning Ordinance that aim to reduce GHG emissions in the Planning Area. Therefore, development facilitated by the proposed project would not conflict with the 2017 Clean Air Plan, and impacts would be less than significant.

In conclusion, development facilitated by the proposed project would be required to comply with requirements of the General Plan Update, updated 2022 CAP, and South San Francisco Municipal Code and Zoning Ordinance to reduce GHG emissions. In addition, the City will be required to comply with existing and new federal, State, and local statutes and regulations related to GHG emissions. As demonstrated above, development facilitated by the proposed project would not conflict with the applicable plans for reducing GHG emissions. Compliance with the plans and codes would reduce impacts to less than significant.

Level of Significance

Less than significant impact.

3.7.7 - Cumulative Impacts

As described above, GHG emissions related to implementation of the proposed project are not confined to a particular air basin but are dispersed worldwide and GHG emissions are widely acknowledged as a significant cumulative impact. Therefore, the analysis under Impacts GHG-1 and GHG-2 also address cumulative impacts.

As discussed under Impacts GHG-1 and GHG-2, the proposed project does not propose the construction of new housing or other development; rather it provides a framework for future growth and development in South San Francisco. Before any development would occur in the City, it is required to be analyzed for consistency with the General Plan Update, updated 2022 CAP, South San Francisco Municipal Code and Zoning Ordinance, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits. Furthermore, existing federal, State, and local regulations and policies described throughout this section that serve to reduce communitywide GHG emissions would apply to future projects. Continued compliance with these regulations and implementation of General Plan Update and updated 2022 CAP policies and action would reduce the proposed project's cumulative contribution to this impact.

As discussed under Impact GHG-1 and shown on Table 3.7-3, the GHG emissions per service population for the General Plan buildout conditions would be within the 4.0 MT CO_2e per service population threshold necessary for the City to achieve its fair share of Statewide GHG reductions in accordance with the State's long-term GHG reduction targets.

All cumulative projects would be required to comply with City ordinances and applicable General Plan policies to reduce GHG emissions. As previously discussed, the updated 2022 CAP meets the requirements established by CEQA Guidelines Section 15183.5(b) to be considered "qualified," meaning the actions and strategies employed by the updated 2022 CAP would enable the City to achieve its stated GHG reduction targets consistent with the current ARB Scoping Plan. By meeting the requirements of the CEQA Guidelines Section 15183.5(b) to be considered "qualified," the updated 2022 CAP may be used for future project-specific tiering following certification of this CEQA document. Therefore, any future projects seeking to tier from the updated 2022 CAP under CEQA Guidelines Section 15183.5(b) would be required to incorporate all relevant policies and actions contained in the updated 2022 CAP to ensure that the GHG reduction strategy employed by the updated 2022 CAP, which demonstrates consistency with GHG reduction targets expressed by the current ARB Scoping Plan, is realized through the adoption of future development projects seeking approval via CEQA Guidelines Section 15183.5(b). Cumulative projects will also be required to comply with existing federal, State, and local regulations and policies to reduce communitywide GHG emissions. Lastly, cumulative projects will be required to comply with the requirements of CEQA and obtain all necessary clearances and permits.

For the reasons described above and in GHG-1 and GHG-2, impacts resulting from implementation of the proposed project related to GHG emissions would not be cumulatively considerable and the cumulative impact would be less than significant.

Level of Cumulative Significance

Less than significant impact.

3.8 - Hazards and Hazardous Materials

3.8.1 - Introduction

Hazards include man-made and natural conditions that may pose a threat to human health, life, property, or the environment. Hazardous materials and waste present health and environmental hazards. Exposure to hazards can occur during manufacture, transportation, use, or disposal of such materials if not handled properly. Hazards to humans can also result from air traffic accidents.

This section of the Draft Program Environmental Impact Report (Draft Program EIR) analyzes impacts associated with exposure to hazards and hazardous materials within the South San Francisco General Plan Update Planning Area (Planning Area) resulting from implementation of the General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project). Specifically, the analysis addresses impacts related to hazardous materials use and transportation, accidental release of hazardous materials, new development or redevelopment on contaminated sites, air traffic hazards, and interference with emergency response and evacuation plans. Future discretionary projects facilitated by the proposed project will be evaluated for project-specific impacts with respect to hazards and hazardous materials at the time they are proposed. See Section 3.16, Wildfire, for a discussion of potential hazards to humans and structures from natural or human-induced wildland fires.

The following is a summary of comments related to Hazards and Hazardous Materials received in response to the Notice of Preparation (NOP). The comment letters are included in Appendix A.

- Expresses concern that portions of the proposed mixed-use residential areas east of U.S. Highway 101 (US-101) are within the airport's runway safety zone boundaries and 65 decibel Community Noise Equivalent Level (CNEL) noise contour, closer to the airport than the areas identified for housing in the previous General Plan Housing Element, which identified cargo-handling and freight-forwarding uses supporting the cargo operations at San Francisco International Airport (SFO).
- States that the southern portions of the Planning Area are within various runway end safety zones, including the Inner Approach/Departure Zone, Inner Turning Zone, and Outer Approach/Departure Zone, and requests that the Draft Program EIR describe and evaluate the project's consistency with land use criteria within these runway end safety zones, as described in the SFO Airport Land Use Compatibility Plan (ALUCP) SP-1 through SP-3.
- Recommends the Draft Program EIR discuss how the proposed policies in the General Plan Update will ensure Airport/Land Use Compatibility with noise, height/airspace protection, safety, and overflight compatibility criteria and policies in the 2012 SFO ALUCP.

The descriptions and analysis in this section are based, in part, on statements, data, and figures provided by the following reference materials (see Appendix F):

- South San Francisco General Plan Update
- South San Francisco Municipal Code

- California State Water Resources Control Board GeoTracker Database
- California Department of Toxic Substances Control EnviroStor Database
- California Department of Toxic Substances Control Hazardous Waste and Substances Site List–Site Cleanup (Cortese List)
- 2021 San Mateo County Multijurisdictional Local Hazard Mitigation Plan
- 2012 SFO ALUCP

3.8.2 - Environmental Setting

Fundamentals

Hazards

This description of existing conditions focuses on hazards from fire and overhead power lines as well as hazardous materials and wastes. A hazard is a situation that poses a level of threat to life, health, property, or the environment. Hazards can be dormant or potential, with only a theoretical risk of harm. However, once a hazard becomes active, it can create an emergency. A hazardous situation that has already occurred is called an incident. Emergency response is action taken in response to an unexpected and dangerous occurrence in an attempt to mitigate its impact on people, structures, or the environment. Emergency situations can range from natural disasters to hazardous materials problems and transportation incidents.

Hazards Materials and Wastes

A hazardous material is any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety, or to the environment, if released; and any material that a handler or an administering regulatory agency under Health and Safety Code Section 25501 has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment. Various properties of a substance may cause that substance to be considered hazardous, including:

- Toxicity—causes human health effects;
- Ignitability—has the ability to burn;
- Corrosivity—causes severe burns or damage to materials; and
- Reactivity—causes explosions or generates toxic gases.

Hazardous Building Materials

Many older buildings contain building materials consisting of hazardous materials. These materials include lead-based paint (LBP), asbestos-containing material (ACM), and polychlorinated biphenyls (PCBs).

Prior to the United States Environmental Protection Agency (EPA) ban in 1978, LBP was commonly used on interior and exterior surfaces of buildings. Disturbances such as sanding and scraping activities, renovation work, gradual wear and tear, old peeling paint, and paint dust particulates have been found to contaminate surface soils or cause lead dust to migrate and affect indoor air quality. Exposure to residual lead can cause severe health effects, especially in children.

Asbestos is a naturally occurring fibrous material that was extensively used as a fireproofing and insulating agent in building construction materials before such uses were banned by the EPA in the 1970s. In addition, many types of electrical equipment contained PCBs as an insulator, including transformers and capacitors. After PCBs were determined to be a carcinogen in the mid to late 1970s, the EPA banned PCB use in new equipment and began a program to phase out certain existing PCB-containing equipment. For example, fluorescent lighting ballasts manufactured after January 1, 1978, do not contain PCBs, and are required to have a label clearly stating that PCBs are not present in the unit.

Hazardous Substances

A hazardous substance can be any biological, natural, or chemical substance, whether solid, liquid, or gas, which may cause harm to human health. Hazardous substances are classified based on their potential health effects, whether acute (immediate) or chronic (long-term). Dangerous goods are classified based on immediate physical or chemical effects, such as fire, explosion, corrosion, and poisoning. An accident involving dangerous goods could seriously harm human health or damage property or the environment. Harm to human health may happen suddenly (acute), such as dizziness, nausea, and itchy eyes or skin; or it may happen gradually over years (chronic), such as dermatitis or cancer. Some people can be more susceptible than others. Hazardous substances and dangerous goods can include antiseptic used for a cut, paint for walls, a cleaning product for the bathroom, chlorine in a pool, carbon monoxide from a motor vehicle, fumes from welding, vapors from adhesives, or dust from cement, stone, or rubber operations. Such hazardous substances can make humans very sick if they are not used properly.

Hazardous Wastes

Hazardous waste is any hazardous material that is to be discarded, abandoned, or recycled. The criteria that define a material as hazardous also define a waste as hazardous. Specifically, materials and waste may be considered hazardous if they are poisonous (toxic); can be ignited by open flame (ignitable); corrode other materials (corrosive); or react violently, explode, or generate vapors when mixed with water (reactive). Soil or groundwater contaminated with hazardous materials above specified regulatory State or federal thresholds is considered hazardous waste if it is removed from a site for disposal. If handled, disposed, or otherwise treated improperly, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The California Code of Regulations, Title 22, Sections 66261.20–24 contains technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

Hazardous Materials Listing

The Cortese List is a list of known hazardous materials or hazardous waste facilities that meet one or more of the provisions of Government Code Section 65962.5, including:

- The list of hazardous waste and substances sites from the California Department of Toxic Substances Control (DTSC) EnviroStor database.[1]
- The list of Leaking Underground Storage Tank (LUST) sites by county and fiscal year from the California State Water Resources Control Board (State Water Board) GeoTracker database.[2]
- The list of solid waste disposal sites identified by the State Water Board with waste constituents exceeding hazardous waste levels outside the waste management unit.[3]
- The list of active cease and desist orders and cleanup and abatement orders from the State Water Board.[4]
- The list of hazardous waste facilities subject to corrective action under Section 25187.5 of the Health and Safety Code, as identified by the DTSC.[5]

Existing Hazardous Materials Conditions

South San Francisco has a history of industrial uses dating back to the 1920s and 1930s, when the large tracts of land east of US-101 were formerly used for heavy industrial uses. Industrial uses, including warehouses, manufacturing areas, and business parks that generate hazardous material are generally concentrated in the East of 101, Lindenville, Orange Park, and El Camino sub-areas (see Exhibit 2-6).

The Proposed Land Use Map for the General Plan Update (Exhibit 2-4) identifies the following land use designations that have the potential to generate hazardous materials:

- Business Technology Park. Campus-like environments for corporate headquarters, research and development facilities, and offices.
- Business Technology Park High. High-density corporate headquarters, research and development facilities, and offices.
- Mixed Industrial. Industrial lands for a wide range of manufacturing, processing, general service, warehousing, storage and distribution, and service commercial uses.
- Mixed Industrial High. High density industrial lands for a wide range of uses.
- Industrial Transition Zone. A transition between a mixed-use area and high industrial area with a mix of residential and industrial uses.

In addition, small quantities of hazardous materials in the City are routinely used, stored, and transported in commercial, retail, educational facilities, health clinics, and households. Federal,

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1 California Department of Toxic Substances Control (DTSC). "Cortese" list of DTSC's EnviroStor database list of Hazardous Waste and Substances sites. DTSC's Hazardous Waste and Substances Site List—Site Cleanup (Cortese List). Website: https://www.envirostor.dtsc.ca.gov/public/. Accessed February 1, 2022.

2 California State Water Resources Control Board (State Water Board). GeoTracker Database Map. Website: https://geotracker.waterboards.ca.gov/map/. Accessed February 1, 2022.

3 California Environmental Protection Agency (Cal/EPA). 2020. Site Portal. Website: https://siteportal.calepa.ca.gov/nsite/map/results. Accessed February 1, 2022.

4 Ibid.

5 California Environmental Protection Agency (Cal/EPA). "Cortese" list of sites subject to Corrective Action pursuant to Health and Safety Code 25187.5. Website: https://www.calepa.ca.gov/sitecleanup/corteselist/section-65962-5a/. Accessed February 1, 2022.

State, and local agency databases maintain comprehensive information on the locations of facilities using large quantities of hazardous materials, as well as facilities generating hazardous waste. Some of these facilities use certain classes of hazardous materials that require accidental release scenario modeling and risk management plans to protect surrounding land uses.

Common contaminants that may be present in the Planning Area include lead, oil, tar, solvents, pesticides, and contaminated soil and groundwater. Because of the age of some existing buildings in the City that may be redeveloped under the proposed project, asbestos may be present in those structures and could be mobilized during demolition activities. Similarly, lead may be present in paint that was sold prior to 1978 or in soil that was contaminated by leaded gasoline or improperly discarded batteries. Existing soil contamination may also be present at potential redevelopment sites due to contamination from household hazardous wastes.

Existing Hazardous Sites

Hazardous waste sites are identified on various regulatory databases. The results of the database searches for the Planning Area are described below and included in Appendix F.

United States Environmental Protection Agency

The EPA Toxic Release Inventory Search allows access to basic facility information, including all forms submitted to the EPA since 1987 as well as aggregate chemical release data for all years reported and relative risk information. The results display any facility that has reported from 1987 to present, even though the facility may or may not have submitted Toxic Release Inventory data in the most recent reporting year. Based on a query of the Toxic Release Inventory Search on March 10, 2022, 14 results were found in South San Francisco and are listed below.[6]

- Berkeley Farms Corporation (561 Eccles Avenue)
- Central Concrete Supply (1305 San Mateo Avenue)
- Columbus Foods (493 Forbes Boulevard)
- Discovery Partners ChemRx (385 Oyster Point Boulevard)
- Equilon Enterprises (135 North Access Road)
- Genentech, Inc. (1 DNA Way)
- Georgia-Pacific Corporation (249 E. Grand Avenue)
- Heat & Control, Inc. (225 Shaw Road)
- ICI Paints (450 E. Grand Avenue)
- Lithotype Company (333 Point San Bruno Boulevard)
- Marine Magnesium Company (330 Point San Bruno Boulevard)
- Metropolitan Furniture Corporation (245 E. Harris Avenue)
- Simpson Coatings Group, Inc. (111 S. Maple Avenue)
- Ultra Clean Technology (182 Beacon Street)

The EPA Superfund Program is responsible for cleaning up the nation's most contaminated land and responds to environmental emergencies, oil spills, and natural disasters. A query of the EPA's

[6] United States Environmental Protection Agency (EPA). 2021. Toxics Release Inventory. October 13. Website: https://www.epa.gov/enviro/tri-search. Accessed March 10, 2022.

Superfund Sites was performed on February 2, 2022, for the Planning Area for National Priorities List (NPL) Sites, Non-NPL Sites, and Superfund Alternative Approach Sites. Based on the query, no sites were listed.[7]

Department of Toxic Substances Control

The Cortese List is a planning document used by the State as well as local agencies and developers to obtain information about the location of hazardous materials release sites. Government Code Section 65962.5 requires the California Environmental Protection Agency (Cal/EPA) to update the list annually. The DTSC is responsible for a portion of the information contained in the Cortese List, which is supplemented by other State and local government agencies. According to a Cortese List search performed on March 5, 2022, no sites are listed within the Planning Area.[8]

DTSC's Brownfields and Environmental Restoration Program (Cleanup Program) includes an Annual Workplan (now referred to State Response and/or Federal Superfund), and also includes backlog sites listed under Health and Safety Code Section 25356. In addition, DTSC's Cortese List includes sites Certified with Operation and Maintenance. The EnviroStor database tracks cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities, sites with known contamination, and sites where there may be reasons to investigate further. According to an EnviroStor search performed on February 2, 2022, a total of 29 sites are located within the Planning Area.[9] The number of sites by status are identified below, followed by a description of the active sites.

- Active (4)
  - Airport Boulevard Properties (309/315/401/411/421 Airport Boulevard, 401-407 Cypress Avenue, and 216 Miller Avenue)
  - Morena Trust (111 Starlite Street and 437, 439, 441 and 441 and 447 Canal Street)
  - Union Pacific (Adjacent to 69 South Linden Avenue)
  - Union Pacific Property (210 feet north-northeast of the Dubuque Avenue off-ramp from East Grand Avenue)
- Inactive–Needs Evaluation (7)
  - Caltrans/South San Francisco Maintenance Station (166 Harbor Way)
  - Cycle Shack, Inc. (1104 San Mateo Avenue)
  - Genentech, Inc. (1 DNA Way)
  - Phase II, Inc. (1229 Montgomery Avenue)
  - Price Club #422 (451 South Airport Boulevard)
  - Shell Oil Company (135 North Access Road)
  - West Coast Automotive Service Center (160 South Linden Avenue)
- Referred to the Regional Water Quality Control Board (RWQCB) (1)

[7] United States Environmental Protection Agency (EPA). 2022. Superfund Sites Where You Live. February 2. Website: https://www.epa.gov/superfund/search-superfund-sites-where-you-live. Accessed February 2, 2022.

[8] Department of Toxic Substances Control (DTSC). 2022. Hazardous Waste and Substances Site List. Website: https://www.envirostor.dtsc.ca.gov/public/search.asp?cmd=search&reporttype=CORTESE&site_type=CSITES,OPEN,FUDS,CLOSE&status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST. Accessed March 5, 2022.

[9] Department of Toxic Substances Control (DTSC). 2022. EnviroStor Database Search. Website: https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=south+san+francisco+ca. Accessed February 2, 2022.

  - L & D Equipment Company DBA Laundry & Dry Cleaning Equipment Co. (220 South Linden Avenue)
- No Action Required (2)
  - Hillside Nursery (Hillside Avenue and Chestnut Street)
  - South San Francisco Land and Improvement Mine Co. (43 Franklin Avenue)
- No Further Action (3)
  - Exide Corporation/South San Francisco Service Center (286 Lawrence Avenue)
  - Highway 101/Oyster Point (Highway 101 at Oyster Point Boulevard)
  - San Francisco AAA Battery 40 (Point San Bruno Boulevard and DNA Way)
- Certified (10)
  - E.I. Dupont De Nemours (169 South Linden Avenue)
  - Mantegani Site (735 Commercial Avenue)
  - Reichold Chemicals, Inc. (120 South Linden Avenue)
  - Tinmet Corporation/MRI (270 East Grand Avenue)
  - Wildberg Brothers–Boliden Metech (349 Oyster Point Boulevard)
  - Basapco, Inc. (27 South Linden Avenue)
  - O'Brien Corporation (450 East Grand Avenue)
  - Homart Development Corporation (851 Gateway Boulevard)
  - Sun Chemical Corporation (20 South Linden Avenue)
  - Union Pacific Railroad Linden (East of 27 South Linden Avenue)
- Closed (2)
  - Dennis X-ray (301 Allerton Avenue)
  - Merry X-ray Chemical Corporation (131 South Maple Avenue)

Union Pacific Property (Active)

Union Pacific Property (60002804) is located approximately 210 feet north-northeast of the Dubuque Avenue off-ramp from East Grand Avenue. Subsurface investigations in 2018 indicated the presence of arsenic, lead, cobalt, copper, antimony, and nickel in soils. Several polynuclear aromatic (PNAs) and polycyclic aromatic hydrocarbons (PAHs) were also detected at concentrations exceeding residential Environmental Screening Levels (ESLs) in soils. Benzene, cobalt, copper, lead, nickel, and zinc were detected in the groundwater samples at concentrations exceeding applicable ESLs where groundwater is not a drinking water resource. In September 2020, additional soil and groundwater sampling was conducted to further characterize the site. Elevated concentrations of lead, cadmium, and zinc were found in soil at concentrations greater than the Total Threshold Limit Concentration (TTLC) screening level, and semi volatile organic compounds (VOCs) were detected at concentrations less than Human and Ecological Risk Office (HERO) screening levels in one soil boring. Groundwater analytical results were below their respective RWQCB ESLs. Further sampling was conducted on July 28, 2021, to further characterize the site and to delineate concentrations of metals greater than the TTLC screening level. On October 14, 2021, a supplemental groundwater investigation was performed to conduct a pump test for the site. The Report of Findings from the 2021 investigations is currently in development.

Airport Boulevard Properties (Active)

Airport Boulevard Properties (60002307) is located at 309/315/401/411/421 Airport Boulevard, 401-407 Cypress Avenue, and 216 Miller Avenue. The parcels have a long history of usage dating from the late 1800s to present. Uses included residences, hotels, saloon, gas station, vehicle repair, waste oil collection, vehicle sales and service, blacksmith shop, and parking areas. Several underground fuel and used oil tanks were previously removed and sites closed by San Mateo County Environmental Health (SMCEH). Residual contaminants at the site include Total Petroleum Hydrocarbons (TPH), tetrachloroethylene (PCE), trichloroethylene (TCE), lead, and PAH. Cleanup of the site was conducted from March 2017 through November 2019 and consisted of removal of underground fuel storage tanks, excavation of contaminated soil, soil gas sampling, installation of a vapor barrier and sub-slab venting system beneath the building foundation, and indoor air sampling. Additional cleanup activities were performed for the sites located at 398 and 400 Cypress Avenue in 2019 to address PCE in soil gas and mitigate the potential for soil gas intrusion into the overlying building; annual reports have been submitted to the DTSC annually for these sites.

Union Pacific (Active)

Union Pacific (60001636) is located adjacent to 69 South Linden Avenue. The data collected to date indicates that there is a chlorinated VOC source at the site. The release mechanism for this source is suspected to be historic surface spills and/or subsurface leaks. Elevated, but lower, concentrations of chlorinated VOCs were detected in off-site soil. Elevated concentrations of metals, primarily arsenic and lead, are present in shallow soil (0 to 10 feet below the ground surface) at sporadic locations within the site. Given their distribution, it appears that the source of metals in shallow soils could either be the site-wide historical operations and/or placement of imported fill potentially impacted with metals. There is also a possibility that the operations associated with the historical business named Atlas Lead Company may be the source of metals. Petroleum hydrocarbons (including TPH-g [gasoline], TPH-d [diesel], and TPH-mo [motor oil]), benzene, toluene, ethylbenzene, and xylene (BTEX), methyl tert-butyl ether (MTBE), and naphthalene (NAP) are present in soil and groundwater beneath the site. The historical site activities (underground storage tanks [USTs]) could be the source of petroleum hydrocarbons. Much of the petroleum contamination in soil was removed in 2009 during UST and aboveground storage tank (AST) removal activities. A Draft Removal Action Workplan was prepared for cleanup of the site and approved by DTSC on January 24, 2020. The workplan proposed enhanced in situ bioremediation to break down contaminants in the groundwater and proposed soil capping to mitigate potential exposure to lead and arsenic in soil. The August and September 2020 groundwater monitoring data were generally consistent with historical data or showed a decreasing trend relative to historical data for benzene, Cis-1,2-DCE, Trans-1,2-DCE, and vinyl chloride.

Morena Trust (Active)

Morena Trust (60002386) is located at 111 Starlite Street and 437, 439, 441, and 447 Canal Street. The site has been in open investigation by San Mateo County's Groundwater Protection Program since September of 2012 to July of 2016. The primary contaminants of concern are PCE and breakdown products from former dry cleaning businesses and TCE in subsurface vapor. The Trinity Source Group conducted three rounds of mobile soil vapor extraction, which reduced sub-slab PCE and TCE concentrations from a high of 610,000 ug/m^3 and 47,000 ug/m^3 pre-remediation to 25,600

ug/m^3 and 1,540 ug/m^3 post-remediation, respectively. The site is currently used for active mixed industrial uses on an approximately 1-acre lot. The commercial building is 23,000 square feet and is occupied by a warehouse and offices. DTSC is acting as a lead agency to address concerns of indoor air contamination from subsurface vapors. Rebounding concentrations of PCE and TCE in sub-slab vapor warrant additional removal action and/or mitigation. DTSC is overseeing the implementation of a sub-slab depressurization system pilot test that began in December 2019. Indoor air monitoring was conducted in August 2021 and indicated no VOC exceedances over the commercial screening levels.

California State Water Resources Control Board

There are no solid waste disposal sites with waste constituents above hazardous waste levels or active Cease and Desist or Cleanup and Abatement Orders within the Planning Area.[10,11,12]

GeoTracker is the State Water Board data management system for sites that impact, or have potential to impact, water quality in California, with emphasis on groundwater. GeoTracker contains records for sites that require cleanup, such as LUST Sites, Cleanup Program Sites, and Department of Defense Sites. GeoTracker also contains records for various unregulated projects, as well as permitted facilities including operating Permitted USTs, Irrigated Lands, Oil and Gas production, and Land Disposal Sites (landfills). According to a GeoTracker search performed on March 3, 2022, a total of 46 open sites are located within the Planning Area.[13] Of the 46 open sites, seven are LUST Cleanup Sites: Arco #6073 (2300 Westborough Boulevard), California Golf Club Of San Francisco (844 West Orange Avenue), Grand Avenue Gas (1086 Grand Avenue), Monfredini Property (477 Forbes), Tony's Services (209 El Camino Real), Union Carbide Corporation (7 South Linden Avenue), and Unocal #6980 (192 El Camino Real). Of the 46 open sites, two are land disposal sites: O'Brien-Haskins Former San Bruno Channel (500 East Jamie Court) and Oyster Point Landfill (Oyster Point Boulevard).

Airport Operations Hazards

Airport-related hazards are generally associated with aircraft accidents, particularly during takeoffs and landings. Other airport operation hazards include incompatible land uses, power transmission lines, wildlife hazards (e.g., bird strikes), and tall structures that penetrate the regulated surfaces surrounding an airport. The Planning Area is located within the Federal Aviation Regulation Part 77 Sphere of Influence (SOI) and within the boundaries of Airport Influence Areas A and B of the SFO ALUCP, which was adopted in 2012.[14] The SFO ALUCP requires all residential development within Area A, which is the entirety of San Mateo County, to provide real estate disclosures (see SFO ALUCP Appendix G-7). Additionally, within Area B, the Airport Land Use Commission (ALUC) (City/County Association of Governments of San Mateo County [C/CAG]) is responsible for reviewing proposed

[10] California Environmental Protection Agency (Cal/EPA). 2020. Site Portal. Website: https://siteportal.calepa.ca.gov/nsite/map/results. Accessed March 3, 2022.
[11] California State Water Resources Control Board (State Water Board). Sites Identified with Waste Constituents Above Hazardous Waste Levels Outside the Waste Management Unit.
[12] California State Water Resources Control Board (State Water Board). List of "active" Cease and Desist Orders and Cleanup and Abatement Orders.
[13] California State Water Resources Control Board (State Water Board). GeoTracker Database Map. Website: https://geotracker.waterboards.ca.gov/map/. Accessed March 3, 2022.
[14] City/County Association of Governments of San Mateo County (C/CAG). 2022. Airport Land Use. Website: https://ccag.ca.gov/programs/airport-land-use/. Accessed March 3, 2022.

land use policy actions, including new general plans, specific plans, zoning ordinances, plan amendments and rezoning, and land development proposals.

The SFO ALUCP has the four primary areas of concern: Aircraft Noise Impact Reduction, Safety of Persons on the Ground and in Aircraft in Flight, Height Restrictions/Airspace Protection, and Overflight Notification. The SFO ALUCP contains policies related to proposed land development in the vicinity of the airport. It provides the standards, criteria, and policies on which the compatibility of proposed local agency land use policy actions is determined. It also establishes the planning boundaries around SFO that define height/airspace protection, noise, and safety areas for policy implementation and areas within which notification of SFO proximity is required as part of real estate transactions.

Exhibit 3.8-1 depicts the Safety Compatibility Zones for the SFO ALUCP. As shown in Exhibit 3.8-1, portions of the Planning Area are located within the Inner Approach/Departure Zone (IADZ), Inner Turning Zone (ITZ), and Outer Approach/Departure Zone (OADZ) of SFO.

Emergency Response Plan and Evacuation Routes/Access

The San Mateo County Emergency Operations Plan (EOP) establishes policies and procedures and assigns responsibilities to ensure the effective management of emergency operations within the San Mateo County Operational Area.[15] The San Mateo County EOP organizes various departments and agencies into 17 Emergency Functions to facilitate planning and coordination prior to an incident and to achieve an effective emergency response and recovery.

Emergency Function 10, Hazardous Materials, provides guidance regarding actions to coordinate and support hazardous materials operations related to the response and recovery from emergencies and disasters. Emergency Function 10 includes the notification and response protocols for incidents involving chemical, biological, radiological, nuclear, and/or high-yield explosive materials.

Emergency Function 13, Law Enforcement, provides a mechanism for coordinating and providing adequate support to authorities for law enforcement, public safety, and security capabilities and resources during an emergency or disaster situation. This includes normal law enforcement responsibilities such as evacuation and movement of the public away from a hazard area and enforcing limited access to hazardous or isolation areas.

In the event of an evacuation, major freeways including Interstate 280 (I-280) and US-101 can be used. If major freeways are not available, potential alternative emergency evacuation routes include State Route (SR) 82, Sister Cities Boulevard, Junipero Serra Boulevard, and East Grand Avenue. Minor Arterials that could be utilized for emergency evacuation include Mission Road and Orange Avenue.

[15] County of San Mateo Office of Emergency Services and Homeland Security. 2015. San Mateo County Emergency Operations Plan. Website: https://hsd.smcsheriff.com/sites/default/files/downloadables/1%20-%20Emergency%20Operations%20Plan.pdf. Accessed February 9, 2022.

3.8.3 - Regulatory Framework

Federal

Occupational Health and Safety Act

The Occupational Safety and Health Administration (OSHA) of the United States Department of Labor is responsible for implementing and enforcing federal laws and regulations that address worker health and safety. OSHA requires specific training for hazardous materials users and handlers, provision of information (procedures for personal safety, hazardous materials storage and handling, and emergency response) to employees who may be exposed to hazardous materials, and acquisition of Material Safety Data Sheets (MSDS) from materials manufacturers. MSDS describe the risks, as well as proper handling and procedures, related to hazardous materials. Employee training must include response and remediation procedures for hazardous material releases and exposures. Construction workers and operational employees at the project site would be subject to these requirements.

Code of Federal Regulations, Titles 29 and 40

Regulations in Code of Federal Regulations Title 29 include requirements to manage and control exposure to LBP and ACM. In California, these requirements are implemented by California Division of Occupational Safety and Health (Cal/OSHA) under California Code of Regulations Title 8 (see further discussion of California Code of Regulations Title 8 below). The removal and handling of ACM is governed primarily by EPA regulations under Code of Federal Regulations Title 40. The regulations require that the appropriate State agency be notified before any demolition, or before any renovations, of buildings that could contain asbestos or ACM above a specified threshold.

Resource Conservation and Recovery Act and Comprehensive Environmental Response, Compensation, and Liability Act

The EPA is responsible for implementing and enforcing federal laws and regulations pertaining to hazardous materials. The primary legislation includes the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA) and the Emergency Planning and Community Right-to-Know Act (known as SARA Title III). RCRA and the 1984 RCRA amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes and mandate that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment, including detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities. As permitted by RCRA, in 1992 the EPA approved California's program called the Hazardous Waste Control Law (HWCL), administered by the DTSC, to regulate hazardous wastes in California, as discussed further below. The purpose of CERCLA is to identify and clean up chemically contaminated sites that pose a significant environmental health threat, and the Hazard Ranking System is used to determine whether a site should be placed on the NPL for cleanup activities. SARA relates primarily to emergency management of accidental releases and requires annual reporting of continuous emissions and accidental releases of specified compounds that are compiled into a nationwide Toxics Release Inventory. Finally, SARA Title III requires formation of State and local emergency planning committees that are responsible for

collecting material handling and transportation data for use as a basis for planning and provision of chemical inventory data to the community at large under the "right-to-know" provision of the law.

Hazardous Materials Transportation Act

Under the Hazardous Materials Transportation Act of 1975, the United States Department of Transportation (USDOT), Office of Hazardous Materials Safety regulates the transportation of hazardous materials on water, rail, and highways, through air, or in pipelines and enforces guidelines created to protect human health and the environment and reduce potential impacts by creating hazardous material packaging and transportation requirements. It also includes provisions for material classification, packaging, marking, labeling, placarding, and shipping documentation. The USDOT provides hazardous materials safety training programs and supervises activities involving hazardous materials. In addition, the USDOT develops and recommends regulations governing the multimodal transportation of hazardous materials.

Aboveground Petroleum Storage Act, and Spill Prevention, Control, and Countermeasure Rule

The Aboveground Petroleum Storage Act of 1990 and the Spill Prevention, Control, and Countermeasure (SPCC) Rule (amended 2010) of the Oil Pollution Prevention regulation (40 Code of Federal Regulations [CFR] Part 112) require the owner or operator of a tank facility with an aggregate storage capacity greater than 1,320 gallons to notify the local Certified Unified Program Agency (CUPA) and prepare an SPCC Plan. The SPCC Plan must identify appropriate spill containment measures and equipment for diverting spills from sensitive areas and must discuss facility-specific requirements for the storage system, inspections, recordkeeping, security, and training.

Clean Water Act

The Clean Water Act (CWA) (Title 33 § 1251 *et seq*. of the United States Code [USC]) is the major federal legislation governing water quality. The CWA established the basic structure for regulating discharges of pollutants into waters of the United States (not including groundwater). The objective of the act is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters."[16] The CWA establishes the basic structure for regulating the discharge of pollutants into waters of the United States. Responsibility for administering the CWA resides with the State Water Board and nine RWQCBs; the San Francisco Bay RWQCB administers the CWA for western Contra Costa County. Section 404 of the CWA regulates temporary and permanent fill and disturbance of waters of the United States, including wetlands. The United States Army Corps of Engineers (USACE) requires that a permit be obtained if a project proposes to place fill in navigable waters and/or to alter waters of the United States below the ordinary high-water mark in non-tidal waters. Section 401 of the CWA requires compliance with State water quality standards for actions within State waters. Compliance with the water quality standards required under Section 401 is a condition for issuance of a Section 404 permit. Under Section 401 of the CWA, every applicant for a permit or license for any activity that may result in a discharge to a water body must obtain a State water

[16] United States Environmental Protection Agency (EPA). 2022. Clean Water Act (CWA) and Federal Facilities. Website: https://www.epa.gov/enforcement/clean-water-act-cwa-and-federal-facilities#:~:text=CWA%20is%20the%20primary%20Federal,in%20compliance%20with%20a%20permit. Accessed February 1, 2022.

quality certification from the RWQCB to demonstrate that the proposed activity would comply with State water quality standards.

State

California Hazardous Waste Control Law

The HWCL is the primary hazardous waste statute in the State of California and implements RCRA as a "cradle-to-grave" waste management system for handling hazardous wastes in a manner that protects human health and the environment and reduces potential resulting impacts of hazardous waste. The law specifies that generators of hazardous waste have the primary duty to determine whether their waste is hazardous and to ensure proper management. The HWCL also establishes criteria for the reuse and recycling of hazardous waste used or reused as raw materials. The law exceeds federal requirements by mandating source reduction planning and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates several types of waste and waste management activities that are not covered by federal law.

California Health and Safety Code

The California Health and Safety Code (Health and Safety Code [HSC] § 25141)[17] defines hazardous waste as a waste or combination of waste that may:

> . . . because of its quantity, concentration, or physical, chemical, or infection characteristics:
>
> (1) Cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitation-reversible illness.
>
> (2) Pose a substantial present or potential hazard to human health or the environment, due to factors including but not limited to carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of or otherwise managed.

These regulations establish criteria for identifying, packaging, and labeling hazardous wastes; prescribe management practices for hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous waste that commonly would be disposed of in landfills.

Under both the RCRA and the HWCL, hazardous waste manifests must be retained by the generator for a minimum of 3 years. The generator must match copies of the manifests with copies of manifest receipts from the treatment, disposal, or recycling facility.

In accordance with Chapter 6.11 of the California Health and Safety Code (HSC § 25404, *et seq*.), local regulatory agencies enforce many federal and State regulatory programs through the CUPA program, including:

[17] FindLaw. 2019. California Code, Health and Safety Code - HSC § 25141. Website: https://codes.findlaw.com/ca/health-and-safety-code/hsc-sect-25141.html. Accessed February 1, 2022.

- Hazardous Materials Business Plans (HMBPs) (HSC § 25501, *et seq*.);
- Uniform Fire Code requirements (Uniform Fire Code [UFC] § 80.103, as adopted by the State Fire Marshal under HSC § 13143.9);
- Underground storage tanks (HSC § 25280, *et seq.*);
- Aboveground storage tanks (HSC § 25270.5(c)); and
- Hazardous waste generator requirements (HSC § 25100, *et seq.*).

San Mateo Environmental Health Services is the CUPA for the County. As the CUPA, they enforce State statutes and regulations through the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program), which oversees aboveground petroleum tanks; generation of hazardous materials; storage and treatment; USTs; generation of medical waste; the accidental release prevention program; and the Local Oversight Program. If a facility ever handles any individual hazardous material in an aggregate amount equal to or greater than 55 gallons (liquids), 500 pounds (solids), or 200 cubic feet (gases), an HMBP must be submitted. An HMBP must include:

- Details that include facility floor plans and identify the business conducted at the site.
- An inventory of hazardous materials handled or stored on the site.
- An emergency response plan.
- A training program in safety procedures and emergency response for new employees who may handle hazardous materials, with an annual refresher course in the same topics for those same employees.

California Code of Regulations, Title 8

Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations. These regulations concern the use of hazardous materials in the workplace, including requirements for employee safety training; availability of safety equipment; accident and illness prevention programs; hazardous substance exposure warnings; and preparation of emergency action and fire prevention plans.

Cal/OSHA also enforces hazard communication program regulations, including procedures for identifying and labeling hazardous substances, and requires that MSDS be available for employee information and training programs. Cal/OSHA standards are generally more stringent than federal regulations. Construction workers and operational employees at the project site would be subject to these requirements.

California Code of Regulations, Title 8, Section 1529 authorizes Cal/OSHA to implement the survey requirements of Code of Federal Regulations Title 29 relating to asbestos. These federal and State regulations require facilities to take all necessary precautions to protect employees and the public from exposure to asbestos. Workers who conduct asbestos abatement must be trained in accordance with federal and State OSHA requirements. The Bay Area Air Quality Management District (BAAQMD) oversees the removal of regulated ACMs (see “Asbestos Demolition, Renovation, and Manufacturing Rule” below).

California Code of Regulations Title 8, Section 1532.1 includes requirements to manage and control exposure to LBP. These regulations cover the demolition, removal, cleanup, transportation, storage, and disposal of lead-containing material. The regulations outline the permissible exposure limit, protective measures, monitoring, and compliance to ensure the safety of construction workers exposed to lead-based material. Loose and peeling LBP must be disposed of as a State and/or federal hazardous waste if the concentration of lead equals or exceeds applicable hazardous waste thresholds. Federal and State OSHA regulations require a supervisor who is certified in identifying existing and predictable lead hazards to oversee air monitoring and other protective measures during demolition activities in areas where LBP may be present. Special protective measures and notification of Cal/OSHA are required for highly hazardous construction tasks related to lead, such as manual demolition, abrasive blasting, welding, cutting, or torch burning of structures, where LBP is present.

California Code of Regulations Title 22, Division 4.5

California Code of Regulations Title 22, Division 4.5 contains the Environmental Health Standards for the Management of Hazardous Waste, which includes California waste identification and classification regulations. California Code of Regulations, Title 22, Chapter 11, Article 3, "Soluble Threshold Limits Concentrations/Total Threshold Limits Concentration Regulatory Limits," identifies the concentrations at which soil is determined to be a California hazardous waste. California's Universal Waste Rule (22 California Code of Regulations [CCR] § 66273) provides an alternative set of management standards in lieu of regulation as hazardous wastes for certain common hazardous wastes, as defined in California Code of Regulations, Title 22, Section 66261.9. Universal wastes include fluorescent lamps, mercury thermostats, and other mercury-containing equipment. Existing structures may contain fluorescent light ballasts that could contain mercury or lead. The Alternative Management Standards for Treated Wood Waste (22 CCR § 67386) were developed by the DTSC to allow for disposal of treated wood as a non-hazardous waste, to simplify and facilitate the safe and economic disposal of such waste. Chemically treated wood can contain elevated levels of hazardous chemicals (e.g., arsenic, chromium, copper, pentachlorophenol, or creosote) that equal or exceed applicable hazardous waste thresholds. The Alternative Management Standards provide for less stringent storage requirements and extended accumulation periods, allow shipments without a hazardous waste manifest and a hazardous waste hauler, and allow disposal at specific non-hazardous waste landfills.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act) is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State must adopt water quality policies, plans, and objectives that protect the State's waters for the use and enjoyment of the people. Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The RWQCBs are required to formulate and adopt water quality control plans (also known as basin plans) for all areas of the region and establish water quality objectives in the plans. The Porter-Cologne Act sets forth the obligations of State Water Board and RWQCBs to adopt and periodically update water quality control plans that recognize and reflect the differences in existing water quality, the beneficial uses of the region's groundwater and surface water, and local water quality conditions and problems. It also authorizes the State Water Board and RWQCBs to

issue and enforce waste discharge requirements and to implement programs for controlling pollution in State waters. Finally, the Porter-Cologne Act also authorizes the State Water Board and RWQCBs to oversee site investigation and cleanup for unauthorized releases of pollutants to soils and groundwater and in some cases to surface waters or sediments.

California Department of Transportation

The California Department of Transportation (Caltrans) has primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies. Caltrans manages more than 50,000 miles of California's highway and freeway lanes, provides intercity rail services, permits more than 400 public use airports and special-use hospital heliports, and works with local agencies. Caltrans is also the first responder for hazardous material spills and releases that occur on those highway and freeway lanes and intercity rail services.

California Highway Patrol

The California Highway Patrol (CHP) is responsible for assuring the safe, convenient, and efficient transportation of people and goods on the State highway system. The CHP implements the Commercial Vehicle Safety Program, which includes enforcement, education, and partnerships to minimize the disastrous results from collisions involving commercial vehicles. CHP's Commercial Vehicle Section aids in safe operation and enforcement of commercial vehicles.

Common carriers are licensed by the CHP, pursuant to the California Vehicle Code, Section 32000. This section requires licensing every motor (common) carrier who transports, for a fee, more than 500 pounds of hazardous materials at one time and every carrier who carries more than 1,000 pounds of hazardous material of the type requiring placards. Common carriers conduct a large portion of the business in the delivery of hazardous materials.

Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP. The CHP conducts regular inspections of licensed transporters to assure regulatory compliance and responds to hazardous materials emergencies on roadways.

California Emergency Response Plan

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Responding to hazardous materials incidents is one part of this plan. The plan is administered by the California Governor's Office of Emergency Services, which coordinates the responses of other agencies. The Contra Costa County Office of the Sheriff's Emergency Services Division coordinates responses to emergencies in unincorporated areas of the County. Emergency response team members respond and work with local fire and police agencies, emergency medical providers, the CHP, California Department of Forestry and Fire Protection (CAL FIRE), the California Department of Fish and Wildlife (CDFW), and Caltrans.

California Department of Forestry and Fire Protection

CAL FIRE has mapped fire threat potential throughout California. CAL FIRE maps fire threat based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and

climate). The threat levels include no fire threat, moderate, high, and very high fire threat. Further, the maps designate the County as the Local Responsibility Area (LRA) for the project site. Additionally, CAL FIRE produced a 2010 Strategic Fire Plan for California, which contains goals, objectives, and policies to prepare for and mitigate the effects of fire on California's natural and built environments. CAL FIRE's Office of the State Fire Marshal provides oversight of enforcement of the California Fire Code as well as overseeing hazardous liquid pipeline safety.

California Building Standards Code

The State of California provided a minimum standard for building design through the 2019 California Building Standards Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations. The 2019 CBC is based on the 2018 International Building Code and has been modified for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local city and county building officials for compliance with the CBC. Typical fire safety requirements of the CBC include the installation of sprinklers in all new high-rise buildings and residential buildings; the establishment of fire resistance standards for fire doors, building material; and specific types of construction.

California Public Resources Code

The California Public Resources Code includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that use an internal combustion engine; [18] specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on-site for various types of work in fire-prone areas.

These regulations include the following:

- Earthmoving and portable equipment with internal combustion engines shall be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (Public Resources Code [PRC] § 4442).
- Appropriate fire suppression equipment shall be maintained during the highest fire danger period—from April 1 to December 1 (PRC § 4428).
- On days when a burning permit is required, flammable materials shall be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor shall maintain the appropriate fire suppression equipment (PRC § 4427).
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines shall not be used within 25 feet of any flammable materials (PRC § 4431).

[18] A spark arrestor is a device that prohibits exhaust gases from an internal combustion engine from passing through the impeller blades where they could cause a spark. A carbon trap is commonly used to retain carbon particles from the exhaust.

Regional

BAAQMD Asbestos Demolition, Renovation, and Manufacturing Rule

The removal of building ACMs is subject to the limitations of BAAQMD Regulation 11, Rule 2, "Hazardous Materials; Asbestos Demolition, Renovation, and Manufacturing." This rule prohibits visible emissions to outside air from any operation involving the demolition of any structure containing asbestos, and sets out requirements for demolition of such structures, including a pre-demolition survey conducted by a certified professional. All friable (i.e., crushable by hand) or non-friable ACMs that may be damaged must be abated before demolition in accordance with applicable requirements. Friable ACMs must be disposed of as asbestos waste at an approved facility. Non-friable ACMs may be disposed of as non-hazardous waste at landfills that accept such wastes.

Association of Bay Area Governments Hazard Mitigation Plan

The Association of Bay Area Governments (ABAG) multijurisdictional Local Hazard Mitigation Plan for the San Francisco Bay Area was updated in 2010 in partnership with the Bay Conservation and Development Commission. The Adapting to Rising Tides program supports local governments in the regional plan for existing and future hazards of climate change. This detailed 5-year plan identifies potential natural and human-made hazards, assesses their potential risks, and includes mitigation methods to reduce risks. The potential hazards identified in the plan include earthquakes and liquefaction, wildfires, floods, drought, solar storms, dam or levee failure, disease outbreak, freezes, wind, heat, thunder and lightning storms, siltation, tornadoes, hazardous materials, slope failure and mudflows, and other hazards. Similarly, mitigation measures include hazard event planning, emergency preparedness coordination, education, facility upgrades, and monitoring actions.

San Mateo County Multijurisdictional Local Hazard Mitigation Plan

The San Mateo County 2021 Multijurisdictional Local Hazard Mitigation Plan (LHMP) is a large regional and cross-jurisdictional effort to plan for the reduction of risk from natural and man-made disasters. The LHMP assesses hazard vulnerabilities and identifies mitigation actions that jurisdictions will pursue in order to reduce the level of injury, property damage, and community disruption that might otherwise result from such events. The LHMP addresses natural and human-caused hazards, including flooding, drought, wildfire, landslides, severe weather, terrorism, cyber threats, pandemic, and the impact of climate change on hazards, as well as other hazards.[19]

San Mateo County Emergency Operations Plan

The San Mateo County EOP establishes policies and procedures and assigns responsibilities to ensure the effective management of emergency operations within the San Mateo County Operational Area. It provides information on the County emergency management structure of how and when the Emergency Operations Center staff is activated. The overall objective of emergency management is to ensure the effective coordination of response forces and resources in preparing for and

[19] San Mateo County. 2021. San Mateo County Multijurisdictional Local Hazard Mitigation Plan. Website: https://cmo.smcgov.org/multijurisdictional-local-hazard-mitigation-plan. Accessed February 1, 2022.

responding to situations associated with natural disasters, technological incidents, and national security emergencies.[20]

Comprehensive Airport Land Use Compatibility Plan for the Environs of the San Francisco International Airport

State law requires airport land use commissions to prepare and adopt an ALUCP for each public use and military airport within their jurisdiction. Further, ALUCs are required to review the plans, regulations, and other actions of local agencies and airport operators within each commission's jurisdiction. Based on State law and guidance provided in the *California Airport Land Use Planning Handbook*, the SFO ALUCP, adopted in 2012, has four primary areas of concern:

- Aircraft Noise Impact Reduction–To reduce the potential number of future airport area residents who could be exposed to noise impacts from airport and aircraft operations.
- Safety of Persons on the Ground and in Aircraft in Flight–To minimize the potential number of future residents and land use occupants exposed to hazards related to aircraft operations and accidents.
- Height Restrictions/Airspace Protection–To protect the navigable airspace around the Airport for the safe and efficient operation of aircraft in flight.
- Overflight Notification–To establish an area within which aircraft flights to and from the Airport occur frequently enough and at a low enough altitude to be noticeable by sensitive residents. Within this area, real estate disclosure notices shall be required, pursuant to State law.

Local

South San Francisco General Plan Update

The General Plan Update includes the following relevant policies and actions that assist in reducing or avoiding potential impacts related to hazards and hazardous materials:

Community Resilience Element

Action CR-1.3.1 Participate in the Countywide Hazard Mitigation Plan. Actively participate in the San Mateo County Hazard Mitigation Plan maintenance protocols and Countywide initiatives. Adopt the Hazard Mitigation Plan by reference upon update. Update emergency operations plans and protocols to account for regularly updated hazard information.

Policy CR-1.6 Continually strengthen emergency management and operations. Continually strengthen emergency management capacity and coordination with the San Mateo County Emergency Operations Center.

[20] San Mateo County Sheriff's Office. 2015. San Mateo Emergency Operations Plan. Website: https://hsd.smcsheriff.com/sites/default/files/downloadables/1%20-%20Emergency%20Operations%20Plan.pdf. Accessed February 1, 2022.

Action CR-1.6.5 Maintain evacuation route plans. Maintain and communicate evacuation route plans for businesses and residents.

Policy CR-1.7 Expand Community Emergency Response Team. Continue expanding the reach of the Community Emergency Response Team program to strengthen community cohesion and emergency preparedness through community engagement efforts.

Policy CR-7.1 Minimize risk from hazardous materials. Minimize the risk to the community associated with hazardous materials by continually integrating updated remediation strategies in coordination with regulating agencies. Continue annual emergency training and coordinated emergency response plans to hazardous materials.

Policy CR-7.2 Coordinate hazardous material regulation and management. Continue to cooperate with federal, State, and County agencies to effectively regulate the management of hazardous materials and hazardous waste.

Policy CR-7.3 Assess hazardous materials management during development review. Assess the use of hazardous materials as part of a development's environmental review and/or include the development of a hazardous management and disposal plan, as a condition of project approval, subject to review by the San Mateo County Health Department.

Policy CR-7.4 Maintain awareness of hazardous waste handling and awareness. Develop an awareness program to expand public engagement in the handling and disposal of hazardous waste in the community, especially at home.

Action CR-7.4.1 Offer educational programming on hazardous materials disposal and pesticides. Continue to offer educational programming on the harmful effects and proper disposal of hazardous materials and pesticides and recommend alternatives that can be used at home and in businesses.

Community Health and Environmental Justice Element

Policy CHEJ-4.1 Support Brownfield remediation. Support cleanup and reuse of contaminated sites in Lindenville and East of 101 to protect human health.

Action CHEJ-4.1.1 Maintain map of hazardous waste sites. Maintain a map and database of contaminated, hazardous waste and substance sites (e.g., Cortese List).

Action CHEJ-4.1.2 Precautions for Oyster Point Landfill. Implement any future City-prepared sea level rise adaptation plan for the Oyster Point Marina and landfill to prevent the release of toxins into the Bay.

Policy CHEJ-4.2 Require remediation before development. Require that contaminated sites are adequately remediated before allowing new development.

Policy CHEJ-4.3 Reduce exposure from hazardous materials. Reduce residents' risk of exposure to hazardous materials and toxic wastes.

Policy CHEJ-4.4 Maintain map of hazardous materials transport route. Maintain an up-to-date truck routes map that minimizes exposures to sensitive land uses from vehicles carrying hazardous materials and toxic waste.

Policy CHEJ-4.5 Establish land use restrictions on new toxic wastes. Prohibit new nonresidential uses that are known to release or emit toxic waste at levels that are harmful to human health while continuing to allow life science, research and development, medical, and other necessary services such as dry cleaners.

Land Use Element

Policy LU-6.6 Encourage non-polluting industries. Encourage development of non-polluting industries that are not major sources of air, water, or noise pollution.

Action LU-6.6.1 Cleanup of Hazardous sites. Seek funding to finance cleanup and redevelopment of contaminated sites.

Sub-Areas Element

Policy SA-12.6 Encourage residential development within 65 db noise contour. Encourage residential development in the South Spruce area that are within the 65 db CNEL contour, provided the interior of a structure meets the standard indoor 45 db CNEL noise requirement.

Action SA-12.6.1 Review consistency with San Francisco International Airport Land Use Compatibility Plan (ALUCP). Review the San Francisco International Airport ALUCP and as needed, update the City of South San Francisco's General Plan to be in conformance with land use compatibility standards in the ALUCP. In the event that updates to the ALUCP allow residential land uses on suitable sites on the El Camino Real corridor where residential is not currently permitted, update the General Plan to allow Urban Residential uses.

Policy SA-21.3 Allow building heights in the East of 101 area to the maximum limits permitted under Federal Aviation regulations.

City of South San Francisco Municipal Code

Chapter 8.20 Illegal Disposal of Discarded Items and Waste Matter and Illegal Littering

Chapter 8.20 of the Municipal Code requires that hazardous waste and substances be disposed of according to federal, State, and local regulations. Failure to comply with Chapter 8.20 could result in administrative penalties for the violations.

Chapter 8.32 Noise Regulations

Chapter 8.32 of the Municipal Code contains the City's noise regulations and includes maximum permissible sound levels and interior noise limits.

Chapter 14.04.320 Coordination with Hazardous Materials Inventory and Response Program

Chapter 14.04.320 of the Municipal Code requires that the first revision of the business plan for any facility subject to the City's hazardous materials inventory and response program shall include a program for compliance with this chapter, including the prohibitions on non-stormwater discharges and illicit discharges and the requirement to reduce stormwater pollutants to the maximum extent practicable.

Chapter 15.08 California Building Standards Code

Chapter 15.08 of the Municipal Code implements the CBC on a local level with certain amendments based on local conditions.

Chapter 15.18 Dangerous Buildings Code

Chapter 15.18 of the Municipal Code implements the Uniform Code for the Abatement of Dangerous Buildings, 1997 Edition, on a local level.

City of South San Francisco Zoning Ordinance

The following chapters of the South San Francisco Zoning Ordinance, including the new or revised chapter of the Zoning Ordinance that are part of the proposed project, assist in reducing or avoiding impacts related to hazards and hazardous materials.

Chapter 20.300 Lot Development Standards (revised)

Section 20.300.009 (Performance Standards) (revised) establishes regulations related to hazards and extremely hazardous materials. The regulations state that the use, handling, storage, and transportation of hazardous and extremely hazardous materials shall comply with the provisions of the California Hazardous Materials Regulations and the California Fire and Building Code, as well as the laws and regulations of the California Department of Toxic Substances Control and the County Environmental Health Agency. Further, activities, processes, and uses shall not generate or emit any fissionable or radioactive materials into the atmosphere, a sewage system or onto the ground. Lastly, all activities, processes and uses involving the use of, or storage of, flammable and explosive materials shall be provided with adequate safety devices against the hazard of fire and explosion.

Chapter 20.320 Nonconforming Uses, Structures, and Lots (revised)

Section 20.320.002 (Establishment of Lawful Nonconforming Uses, Structures and Lots) (revised) states that no permit shall be granted that would allow the establishment or creation of an airport hazard or permit a nonconforming structure or nonconforming use to be made or become higher or become a greater hazard to air navigation than it was when the applicable regulation was adopted or than it is when the application for a permit is made.

3.8.4 - Methodology

Impacts related to hazards and hazardous materials resulting from implementation of the proposed project (collectively, the General Plan Update, Zoning Code Amendments, and Climate Action Plan) are discussed below. The following impact analysis is based on an assessment of baseline conditions for the Planning Area, including locations of hazardous materials use and storage through a review of various databases identifying existing contaminated sites, safety and noise hazards identified in the

SFO ALUCP, and City emergency response and evacuation plan requirements. This analysis identifies potential impacts based on the interaction between the affected environment and construction, operation, and maintenance activities related to future development that could occur under the proposed project.

Additional analyses regarding hazards and health risk related to emissions of toxic air contaminants (TACs) are addressed in Section 3.2, Air Quality. Other geotechnical-related safety hazards, such as earthquakes, are addressed in Section 3.6, Geology, Soils, and Seismicity. Flooding and inundation hazards, including those related to erosion and mudflow, are addressed in Section 3.9, Hydrology and Water Quality. Compatibility with the SFO ALUCP is discussed in greater detail in Section 3.10, Land Use and Planning. Excessive noise exposure with respect to airport use or air traffic is addressed in Section 3.11, Noise. Transportation-related safety hazards are addressed in Section 3.14, Transportation. Lastly, potential hazards to humans and structures from natural or human induced wildland fires are addressed in Section 3.16, Wildfire.

3.8.5 - Thresholds of Significance

According to the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist, to determine whether impacts related to hazards and hazardous materials have significant environmental effects, the following questions are analyzed and evaluated. Would the proposed project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) 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?

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working the project area?

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury, or death involving wildland fires? (See Section 3.16, Wildfire.)

3.8.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Routine Transport, Use, or Disposal of Hazardous Materials

Impact HAZ-1: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Development under the proposed project would result in additional residential and nonresidential development, as well as other private and public improvements throughout the Planning Area, which could result in an increase in the routine transportation, use, and disposal of hazardous materials. The Proposed Land Use Map for the General Plan Update (Exhibit 2-4) identifies the following land use designations that have the potential to generate hazardous materials: Business Technology Park, Business Technology Park High, Mixed Industrial, Mixed Industrial High, and Industrial Transition Zone. During construction activities, for example, commercially available hazardous materials (e.g., fuels, solvents, paints, and some consumer electronics) would be used and may generate small amounts of hazardous waste. Likewise, demolition of existing structures could potentially result in the release of hazardous building materials (e.g., asbestos, lead paint, etc.). However, all new development (construction and operations) would be required to comply with mandatory regulations for hazardous materials adopted by the EPA, OSHA, USDOT, DTSC, Caltrans, CHP, local CUPA, and BAAQMD as described in the Regulatory Framework section. Mandatory compliance with regulations would ensure that all impacts would be less than significant.

Hazardous Material Transportation

As described in the Regulatory Framework section, the transportation of hazardous materials on local roadways and along railways is regulated and monitored by multiple agencies. These agencies enforce federal and State regulations regarding transportation of hazardous materials and respond to hazardous material spills and releases that occur on roadways, railway lines, and at railroad crossings. Further, businesses handling or storing hazardous materials over threshold quantities are required to submit an HMBP to the local CUPA. Should an accident occur during transport of hazardous materials, the CUPA, South San Francisco Fire Department (SSFFD), and South San Francisco Police Department (SSFPD) would respond. As noted, the CHP conducts regular inspections of licensed transporters to assure regulatory compliance and responds to hazardous materials emergencies on roadways.

The General Plan Update contains policies and actions that would further minimize risk to the public or environment resulting from the transportation of hazardous materials and waste. Policy CHEJ-4.4 requires the City to maintain an up-to-date truck routes map that minimizes exposures to sensitive land uses from vehicles carrying hazardous materials and toxic waste. Action CR-1.3.1 requires the City to participate in the San Mateo County Hazard Mitigation Plan maintenance protocols and Countywide initiatives, adopt the Hazard Mitigation Plan by reference upon update, and update emergency operations plans and protocols to account for regularly updated hazard information. Policy CR-1.6 requires the City to continually strengthen emergency management capacity and

coordination with the San Mateo County Emergency Operations Center. Policy CR-7.2 requires the City to cooperate with federal, State, and County agencies to effectively regulate the management of hazardous materials and hazardous waste. Lastly, Policy CR-7.3 requires the City to assess the use of hazardous materials as part of a development's environmental review and/or include the development of a hazardous management and disposal plan, as a condition of project approval, subject to review by the San Mateo County Health Department.

Hazardous Material Use

The SSFFD and South San Francisco Building Division coordinate review of building permits to ensure hazardous materials requirements are met prior to construction, including required separation between hazardous materials and sensitive land uses and proper hazardous materials storage facilities. Any businesses that generate or use hazardous materials within the Planning Area would also be subject to existing hazardous materials regulations such as those implemented by the local CUPA. The CUPA and SSFFD also conduct inspections for fire safety and hazardous materials management of businesses and residential dwellings. Businesses storing or handling hazardous materials over threshold quantities are required to submit HMBPs pursuant to federal, State, and local regulations. These HMBPs must include measures for safe storage, use, and handling of hazardous materials, along with a contingency plan that describes the facility's response procedures in the event of a hazardous materials release.

The General Plan Update contains policies and actions that would further minimize risk to the public or environment resulting from the use of hazardous materials. Policy CHEJ-4.5 prohibits new nonresidential uses that are known to release or emit toxic waste at levels that are harmful to human health while continuing to allow life science, research and development, medical, and other necessary services such as dry cleaners. Policy LU-6.6 encourages the development of non-polluting industries that are not major sources of air, water, or noise pollution. Policy CR-7.1 requires the City to integrate updated remediation strategies related to hazardous materials in coordination with regulating agencies and continue annual emergency training related to hazardous materials. Policy CR-7.3 requires the City to assess the use of hazardous materials as part of a development's environmental review and/or include the development of a hazardous management and disposal plan, as a condition of project approval, subject to review by the San Mateo County Health Department. Lastly, Policy CR-7.4 requires the City to develop an awareness program to expand public engagement in the handling and disposal of hazardous waste in the community, especially at home.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, includes rules and regulations to minimize risk to the public or environment resulting from the use of hazardous materials. Section 20.300.009 (Performance Standards) (revised) states that the use, handling, storage, and transportation of hazardous and extremely hazardous materials shall comply with the provisions of the California Hazardous Materials Regulations and the California Fire and Building Code as well as the laws and regulations of the California Department of Toxic Substances Control and the County Environmental Health Agency. Further, activities, processes, and uses shall not generate or emit any fissionable or radioactive materials into the atmosphere, a sewage system or onto the ground. Lastly, all activities, processes, and uses involving the use of, or

storage of, flammable and explosive materials shall be provided with adequate safety devices against the hazard of fire and explosion. There are no actions identified in the Climate Action Plan related to hazardous materials use.

Hazardous Material Disposal

The disposal of hazardous materials is regulated and monitored by the City of South San Francisco (Chapter 8.20 of the Municipal Code), local CUPA, SSFFD, Cal/OSHA, and the DTSC consistent with the requirements of federal, State, and local regulations and policies.

The General Plan Update contains policies and actions that would further minimize risk to the public or environment resulting from the disposal of hazardous materials. Policy CR-7.2 requires the City to cooperate with federal, State, and County agencies to effectively regulate the management of hazardous materials and hazardous waste. Policy CR-7.3 requires the City to assess the use of hazardous materials as part of a development's environmental review and/or include the development of a hazardous management and disposal plan, as a condition of project approval, subject to review by the San Mateo County Health Department. Policy CR-7.4 requires the City to develop an awareness program to expand public engagement in the handling and disposal of hazardous waste in the community, especially at home. Lastly, Action CR-7.4.1 requires the City to offer educational programming on the harmful effects and proper disposal of hazardous materials and pesticides and recommend alternatives that can be used at home and in businesses.

The proposed project identifies future land uses but does not describe specific development projects that will be undertaken during the planning horizon. Thus, estimating project-specific impacts would involve unreasonable speculation. Accordingly, future projects would be subject to conducting an environmental analysis at the time a specific project is defined. In reviewing individual project applications, the City would determine which General Plan Update policies and actions and Zoning Ordinance chapters apply, depending on the specific characteristics of the project type and/or project site during the development review process.

In conclusion, while development envisioned by the proposed project could result in an increase in the transportation, use, and disposal of hazardous materials in the Planning Area, future projects would be required to comply with requirements and regulations set forth by the City of South San Francisco, EPA, OSHA, USDOT, DTSC, Caltrans, CHP, local CUPA, and BAAQMD. Therefore, impacts related to the transportation, use, and disposal of hazardous materials would be less than significant.

Level of Significance

Less than significant impact.

Hazardous Materials Upset Risk

Impact HAZ-2:	**The proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.**

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. Because South San Francisco is a fully built city, new development would primarily occur on parcels that already contain existing land uses, with the majority of potential growth occurring within the East of 101, Lindenville, Downtown, and El Camino planning sub-areas (Chapter 2, Project Description, Exhibit 2-5). Additionally, the proposed project may result in other private and public improvements throughout the City with the potential for environmental effects related to hazardous materials (see Chapter 2, Project Description, Sections 2.5.2, 2.5.5, and 2.5.6). Construction activities have the potential to release potentially hazardous soils- and groundwater-based materials into the environment during site grading and excavation operations. Likewise, demolition of existing structures could potentially result in the release of hazardous building materials (e.g., asbestos, lead paint, etc.)

As noted in Impact HAZ-1, compliance with mandatory regulations would reduce all potential construction-related impacts to a less than significant level, and General Plan Update policies and actions and the Zoning Ordinance would further reduce potential impacts and ensure that they are less than significant.

The General Plan Update contains several policies and actions that would minimize risk to the public or environment resulting from reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Policy CR-7.3 requires the City to assess hazardous materials management during development review. Policy CHEJ-4.1 requires the City to support Brownfield remediation through cleanup and reuse of contaminated sites in Lindenville and East of 101 to protect human health. Action CHEJ-4.1.1 requires the City to maintain a map and database of contaminated, hazardous waste and substance sites (e.g., Cortese List). Action CHEJ-4.1.2 requires the City to implement any future City-prepared sea level rise adaptation plan for the Oyster Point Marina and landfill to prevent the release of toxins into the Bay. Lastly, Policy CHEJ-4.2 requires that contaminated sites are adequately remediated before allowing new development.

To prevent and minimize hazardous conditions to below a level of significance, existing local, State, and federal law, including those listed under Section 3.8.3 Regulatory Framework, will be enforced at all construction sites. For example, compliance with existing regulations would ensure that the public and environment are not exposed to any risks related to hazardous materials during demolition and construction. Future projects would comply with Cal/OSHA regulations concerning the use of hazardous materials, including requirements for safety training, exposure warnings, availability of safety equipment, and preparation of emergency action/prevention plans. All contaminated waste must be collected and disposed of at an appropriately licensed disposal or treatment facility.

Future development (including redevelopment of existing developed sites) must comply with the California Code of Regulations. Title 8 of the California Code of Regulations, which establishes Cal/OSHA requirements related to public and worker protection. Topics addressed include materials exposure limits, equipment requirements, protective clothing, hazardous materials, and accident prevention. Construction safety and exposure standards for lead and asbestos are set forth in Title 8. Title 17 of the California Code of Regulations, which establishes regulations relating to use and disturbance of materials containing naturally occurring asbestos. Soil excavated during construction is regulated under Title 22 of the California Code of Regulations. The local CUPA is responsible for

ensuring that the California Code of Regulations and all other programs related to hazardous materials are implemented during construction activities.

As described in Section 3.9, Hydrology and Water Quality, future development that disturbs one acre or more of soil, or that is part of a common plan of development that disturbs one acre or more of soil, must obtain permit coverage under the Construction General Permit by filing a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) with the RWQCB prior to commencement of construction. The SWPPP must describe the site, facility, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, control of construction sediment and erosion, maintenance responsibilities, and non-stormwater management controls. The Best Management Practices in the SWPPP include measures to prevent spills and require on-site materials for cleanup.

As noted in Impact HAZ-1, future projects would be subject to conducting an environmental analysis at the time a specific project is defined. In reviewing individual project applications, the City would determine which General Plan Update policies and actions and Zoning Ordinance chapters apply depending on the specific characteristics of the project type and/or project site during the development review process.

Compliance with State law and implementation of federal, State, and local General Plan Update policies and actions and the Zoning Ordinance during construction activities would ensure that future development under the proposed project would not create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving release of hazardous materials into the environment. Therefore, impacts would be less than significant.

Level of Significance

Less than significant impact.

Hazardous Emissions Proximate to a School

Impact HAZ-3:	**The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.**

As discussed in Section 3.13, Public Services and Recreation, the City is served by public and private schools, including 15 schools within the South San Francisco Unified School District (SSFUSD), one private elementary school, 10 preschools, and 10 daycare centers. Given the distribution of schools in the City, it is possible that future development and redevelopment associated with the proposed project, which may involve hazardous emissions or handling of hazardous materials and wastes, may occur within 0.25 mile of an existing or future school.

As described under Impacts HAZ-1 and HAZ-2, development facilitated by the proposed project would be required to comply with existing federal, State, and local regulations related to hazardous materials, including those codified in General Plan Update Policies CR-7.3, CR-7.4, CHEJ-4.5, and LU-6.6 and Section 20.300.009 (Performance Standards) (revised) of the Zoning Ordinance .

In particular, the SSFFD and South San Francisco Building Division coordinate review of building permits to ensure hazardous materials requirements are met prior to construction, including required separation between hazardous materials and sensitive land uses and proper hazardous materials storage facilities. Future development (including redevelopment of existing developed sites) under the proposed project would be required by the local CUPA to store, manage, and dispose of the materials in accordance with the Unified Program. Therefore, impacts would be less than significant.

Level of Significance

Less than significant impact.

Government Code Section 65962.5 Sites

Impact HAZ-4:	**The proposed project would not be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment.**

As discussed in the Environmental Setting section, South San Francisco has a history of industrial uses dating back to the 1920s and 1930s, when the large tracts of land east of US-101 were formerly used for heavy industrial uses. Industrial uses, including warehouse, manufacturing areas, and business parks that generate hazardous material are generally concentrated in the East of 101, Lindenville, Orange Park, and El Camino sub-areas (see Exhibit 2-6). According to an EnviroStor search performed on February 2, 2022, a total of 29 sites are located within the Planning Area, including four active sites. According to a GeoTracker search performed on March 3, 2022, a total of 46 open sites are located within the Planning Area. Of the 46 open sites, seven are LUST Cleanup Sites: Arco #6073 (2300 Westborough Boulevard), California Golf Club of San Francisco (844 West Orange Avenue), Grand Avenue Gas (1086 Grand Avenue), Monfredini Property (477 Forbes), Tony's Services (209 El Camino Real), Union Carbide Corporation (7 South Linden Avenue), and Unocal #6980 (192 El Camino Real). Of the 46 open sites, two are land disposal sites: O'Brien-Haskins Former San Bruno Channel (500 East Jamie Court) and Oyster Point Landfill (Oyster Point Boulevard). As such, development facilitated by the proposed project could occur on a contaminated site. Future discretionary projects facilitated by the proposed project will be evaluated for project-specific impacts related to hazardous materials at the time they are proposed.

As discussed in Impact HAZ-1, HAZ-2, HAZ-3, and the Regulatory Framework, any development on a contaminated site would be required to comply with mandatory regulations, which would ensure it does not create a significant hazard to the public or the environment. For instance, Cal/EPA is authorized by the EPA to enforce and implement certain federal hazardous materials laws and regulations. The DTSC, a department of the Cal/EPA, protects California and Californians from exposure to hazardous waste, primarily under the authority of the RCRA and the California Health and Safety Code. The DTSC requirements include the need for written programs and response plans, such as HMBPs. The DTSC programs include dealing with aftermath clean-ups of improper hazardous waste management, evaluation of samples taken from sites, enforcement of regulations regarding use, storage, and disposal of hazardous materials, and encouragement of pollution prevention.

The General Plan Update contains several policies and actions that would minimize risk to the public or environment resulting from the inadvertent discovery of hazardous materials on a project site. Policy CR-7.3 requires the City to assess hazardous materials management during development review. Policy CHEJ-4.1 requires the City to support Brownfield remediation through cleanup and reuse of contaminated sites in Lindenville and East of 101 to protect human health. Action CHEJ-4.1.1 requires the City to maintain a map and database of contaminated, hazardous waste and substance sites (e.g., Cortese List). Action LU-6.6.1 requires the City to seek funding to finance cleanup and redevelopment of contaminated sites. Lastly, Policy CHEJ-4.2 requires that contaminated sites are adequately remediated before allowing new development.

As described under HAZ-1, should any hazardous materials be inadvertently encountered during construction activities from development facilitated by the proposed project, the handling, transportation, and disposal of hazardous materials would be required to comply with the requirements and regulations set forth by the City of South San Francisco, EPA, OSHA, USDOT, DTSC, Caltrans, CHP, local CUPA, and BAAQMD. In reviewing individual project applications, the City would determine which General Plan Update policies and actions and Zoning Ordinance chapters apply, depending on the specific characteristics of the project type and/or project site during the development review process.

Therefore, impacts would be less than significant.

Level of Significance

Less than significant impact.

Proximity to Public Airport Safety Hazard

Impact HAZ-5:	**The proposed project would not result in a safety hazard or excessive noise for people residing or working in the project area.**

The Planning Area is located within the Federal Aviation Regulation Part 77 SOI and within the boundaries of Airport Influence Areas A and B of the SFO ALUCP, which was adopted in 2012. The SFO ALUCP requires all residential development within Area A, which is the entirety of San Mateo County, to provide real estate disclosures (see SFO ALUCP Appendix G-7). Additionally, within Area B, the ALUC C/CAG is responsible for reviewing proposed land use policy actions, including new general plans, specific plans, zoning ordinances, plan amendments and rezoning, and land development proposals.

Exhibit 3.8-1 depicts the Safety Compatibility Zones for the SFO ALUCP. As shown in Exhibit 3.8-1, portions of the Planning Area are located within the IADZ, ITZ, and OADZ of SFO. Based on the Proposed Land Use Map for the General Plan Update (Exhibit 2-4), the following land uses, and proposed improvements are located within a Safety Compatibility Zone for the SFO ALUCP:

Zone 2–Inner Approach/Departure Zone

- Industrial Transition Zone
- Open Space

Zone 3–Inner Turning Zone

- Industrial Transition Zone
- Mixed Industrial High
- Business Technology Park High
- East of 101 Mixed Use
- Community Commercial
- High Density Mixed Use
- Public
- Open Space
- Proposed bridge or elevated roadway
- Proposed park
- Proposed pedestrian and bicycle connection

Zone 4–Outer Approach/Departure Zone

- Low Density Residential
- Low Density Mixed Use
- Urban Residential
- El Camino Mixed Use High
- Business and Professional Office Open Space
- Proposed pedestrian and bicycle connection
- Proposed new street

Development under the proposed project would result in additional residential and nonresidential development, as well as other private and public improvements (see Chapter 2, Project Description, Sections 2.5.2, 2.5.5, and 2.5.6), throughout the Planning Area, some of which could occur within a Safety Compatibility Zone for the SFO ALUCP. As such, development under the proposed project could expose people residing or working in the Planning Area to a safety hazard or excessive noise because of proximity to SFO. Areas of change from existing land uses, and therefore areas that encompass the majority of projected net new development, are shown on Exhibit 2-5. As shown on Exhibit 2-5, some areas within a Safety Compatibility Zone that are identified as Retail and Services on the existing Land Use Map, are proposed to be changed to Urban Residential, El Camino Mixed Use High, and East of 101 Mixed Use. A small portion of Industrial land use within a Safety Compatibility Zone is proposed to be changed to High Density Mixed Use.

The General Plan Update contains policies and actions that minimize the exposure of people residing or working in the Planning Area to a safety hazard or excessive noise because of proximity to SFO. Policy SA-12.6 requires the City to encourage residential development in the South Spruce area that are within the 65 decibel (db) CNEL contour, provided the interior of a structure meets the standard indoor 45 db CNEL noise requirement. Action SA-12.6.1 requires the City to review the SFO ALUCP and, as needed, to update the City of South San Francisco's General Plan to be in conformance with land use compatibility standards in the ALUCP. Action SA-12.6.1 further states that in the event that updates to the ALUCP allow residential land uses on suitable sites on the El Camino Real corridor where residential is not currently permitted, the City will update the General Plan to allow Urban Residential uses. Lastly, Policy SA-21.3 requires the City to allow building heights in the East of 101

area to the maximum limits permitted under Federal Aviation regulations. Section 3.11, Noise, identifies additional policies and actions, as well as Mitigation Measure (MM) NOI-2, Airport Noise Impact Reduction Plan, to address potential exposure to people residing or working in the vicinity of SFO to excessive noise levels. There are no actions identified in the Climate Action Plan that minimize the exposure of people residing or working in the Planning Area to a safety hazard or excessive noise because of proximity to SFO.

As the City receives development applications for subsequent development under the proposed project, those applications will be reviewed by the City of South San Francisco for compliance with the policies and actions of the General Plan Update to reduce the exposure of people residing or working in the City to a safety hazard or excessive noise because of proximity to SFO. In addition, the City's Municipal Code, which implements the City's General Plan would be reviewed when development applications are received, including Chapter 15.08, California Building Code, and Chapter 8.32, Noise Regulations. Further, Section 20.320.002 (Establishment of Lawful Nonconforming Uses, Structures and Lots) (revised) ensures that no permit shall be granted that would allow the establishment or creation of an airport hazard or permit a nonconforming structure or nonconforming use to be made or become higher or become a greater hazard to air navigation. Lastly, in accordance with the SFO ALUCP, the City would consult with the C/CAG and Federal Aviation Administration when development applications for subsequent development under the proposed project in the vicinity of SFO are received.

In conclusion, development envisioned by the proposed project is generally focused in already developed areas of the City; however, development could result in an incremental increase in the exposure of people residing or working in the Planning Area to a safety hazard or excessive noise because of proximity to SFO. However, future projects would be required to comply with the policies and actions within the General Plan Update and the South San Francisco Municipal Code and Zoning Ordinance regarding interior noise standards and maximum building heights permitted under Federal Aviation regulations. Further, continued consultation with the C/CAG and Federal Aviation Administration for projects located in the vicinity of SFO will minimize the exposure of people residing or working in the City to a safety hazard or excessive noise because of proximity to SFO. Therefore, impacts would be less than significant.

See also Section 3.11, Noise, which addresses excessive noise exposure with respect to airport use or air traffic.

Level of Significance

Less than significant impact.

Emergency Response and Evacuation

Impact HAZ-6:	**The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.**

As described in the Environmental Setting section, San Mateo County has developed an EOP that establishes policies and procedures and assigns responsibilities to ensure the effective management of emergency operations within the San Mateo County Operational Area. The San Mateo County

EOP organizes various departments and agencies into 17 Emergency Functions to facilitate planning and coordination prior to an incident and to achieve an effective emergency response and recovery. Emergency Function 13, Law Enforcement, provides a mechanism for coordinating and providing adequate support to authorities for law enforcement, public safety, and security capabilities and resources during an emergency or disaster situation. This includes normal law enforcement responsibilities such as evacuation and movement of the public away from a hazard area and enforcing limited access to hazardous or isolation areas. The SSFFD maintains the Emergency Operations Center at 490 North Canal Street and a training tower at 480 North Canal Street. The SSFFD manages and maintains emergency plans and training of City staff and community members. Through public education events and training sessions, the SSFFD focuses on activities that will prepare the community to take care of itself in the period immediately following a local disaster. For example, the Community Emergency Response Team (CERT) program educates volunteers about disaster preparedness for the hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations.[21]

In the event of an evacuation, major freeways, including I-280 and US-101, can be used. If major freeways are not available, potential alternative emergency evacuation routes include SR-82, Sister Cities Boulevard, Junipero Serra Boulevard, and East Grand Avenue. Minor arterials that could be utilized for emergency evacuation include Mission Road and Orange Avenue. Evacuation routes are communicated to residents and employers via a two-step process. First, residents and employers are asked to opt into SMC Alert-San Mateo County's Alert System (www.smcalert.info) to be notified about important emergency information such as evacuation updates. Second, residents and employers are asked to visit ZoneHaven, the City's Community Evacuation Interface (www.zonehaven.com) to search their address and zone, which will provide additional emergency information, including evacuation routes.[22]

Development under the proposed project would result in additional residential and nonresidential development as well as other private and public improvements throughout the Planning Area. However, because South San Francisco is a fully built city, new development would primarily occur on parcels that contain existing homes or businesses. As most of the development under the proposed project would occur as redevelopment within the urbanized areas of the City, the proposed project would not materially overburden any designated evacuation routes nor substantially impair any emergency response plans or emergency evacuation plans.

Development and growth in the City under the proposed project could result in an increase in demand for emergency response services. New development under the proposed project would be considered in the context of the San Mateo County EOP and is not expected to impair implementation of or physically interfere with the San Mateo County EOP. The San Mateo County EOP is reviewed and updated on a regular basis. As such, as development occurs under the proposed

[21] City of South San Francisco Fire Department (SSFFD). 2022. Emergency Preparedness. Website: https://www.ssf.net/departments/fire/emergency-preparedness. Accessed February 22, 2022.

[22] Anderson, Kenneth. Emergency Services Manager, City of South San Francisco Fire Department (SSFFD). Personal communication: email. June 8, 2022.

project, the San Mateo County EOP can be modified to reflect new growth within the Planning Area. Therefore, impacts would be less than significant.

Development and growth in the City under the proposed project could result in an increase in demand for emergency evacuation routes within the Planning Area. Most of the development facilitated by the proposed project would be served by existing emergency evacuation routes, which have sufficient capacity to accommodate projected growth. The General Plan Update contains policies and actions that aim to continually strengthen emergency response and emergency evacuation. Action CR-1.3.1 requires the City to update emergency operations plans and protocols to account for regularly updated hazard information. Policy CR-1.6 requires the City to strengthen emergency management capacity and coordination with the San Mateo County Emergency Operations Center (EOC). Action CR-1.6.5 requires the City to maintain and communicate evacuation route plans for businesses and residents. Lastly, Policy CR-1.7 requires the City to expand the reach of the CERT program to strengthen community cohesion and emergency preparedness through community engagement efforts.

Given the existing inter-jurisdictional programs that are already in place, and the City's focus on maintaining and enhancing emergency management capacity and evacuation routes to protect life and property in the event of emergency, impacts would be less than significant.

Level of Significance

Less than significant impact.

3.8.7 - Cumulative Impacts

The geographic scope of the cumulative impact analysis for hazards and hazardous materials is the South San Francisco Planning Area as well as the surrounding cities of Brisbane, Daly City, Pacifica, San Bruno, and Millbrae. This analysis evaluates whether the impacts of the proposed project, together with the impacts of cumulative development, would result in a cumulatively significant impact related to hazards and hazardous materials. This analysis then considers whether incremental contribution to cumulative impacts associated with the implementation of the proposed project would be significant. Both conditions must apply for a project's cumulative effects to rise to a level of significance.

Hazards and Hazardous Materials

Cumulative projects would be subject to the requirements and regulations set forth by the EPA, OSHA, USDOT, DTSC, Caltrans, CHP, local CUPA, and BAAQMD related to transport, use, and disposal of hazardous materials. Accordingly, cumulative development would not result in physical changes that would result in a significant environmental effect. Cumulative projects will also be required to implement a SWPPP and comply with the California Code of Regulations during construction, site grading, excavation operations, and building demolition. For these reasons, cumulative projects would have a less than significant cumulative effect.

Moreover, the proposed project's incremental contribution to the less than significant cumulative impacts would not be significant. As previously discussed, development under the proposed project

would result in additional residential and nonresidential development, as well as other private and public improvements throughout the Planning Area, which could result in an increase in the routine transportation, use, and disposal of hazardous materials. Potential impacts would be reduced to below a level of significance, as discussed above, because construction must comply with the California Code of Regulations and implement a SWPPP to prevent hazardous materials spills and protect public safety. To ensure that development consistent with the General Plan Update results in a less than significant contribution to cumulative impacts, applications for development would be reviewed by the City of South San Francisco for compliance with General Plan Update policies and actions, including, but not limited to, Policies CR-7.3, CHEJ-4.1, and CHEJ-4.2, to further reduce potential impacts related to sites with known hazardous materials to less than significant.

Additionally, as previously stated, development under the proposed project would be required to comply with all requirements and regulations set forth by the City of South San Francisco, EPA, OSHA, USDOT, DTSC, Caltrans, CHP, local CUPA, and BAAQMD related to transport, use, and disposal of hazardous materials. Accordingly, development under the proposed project would not result in physical changes that would incrementally contribute to a significant environmental effect. For these reasons, the proposed project's contribution to cumulative impacts would be considered less than significant.

Airport Safety Hazards

Cumulative projects would be subject to the requirements and regulations set forth by the SFO ALUCP and Federal Aviation Administration related to the exposure of people residing or working in the area to a safety hazard or excessive noise. Cumulative projects would also be required to comply with General Plan policies and Municipal Code regulations related to interior noise standards and maximum building heights. For these reasons, cumulative projects would have a less than significant effect.

Moreover, the proposed project's incremental contribution to cumulative impacts would not be significant. As previously discussed, development under the proposed project would result in additional residential and nonresidential development, as well as other private and public improvements throughout the Planning Area, which could result in an increase in the exposure of people residing or working in the area to a safety hazard or excessive noise. Potential impacts would be reduced to below a level of significance, as discussed above, because future projects would be required to comply with the policies and actions within the General Plan Update and the South San Francisco Municipal Code and Zoning Ordinance regarding interior noise standards and maximum building heights permitted under Federal Aviation regulations. Further, continued consultation with the C/CAG and Federal Aviation Administration for projects located in the vicinity of SFO will minimize the exposure of people residing or working in the City to a safety hazard or excessive noise because of proximity to SFO. To ensure a less than significant contribution to cumulative impacts, development consistent with the General Plan Update and Municipal Code will be required to implement all applicable policies during the design review process. As the City receives development applications for subsequent development under the proposed project, those applications would be reviewed by the City of South San Francisco for compliance with General Plan Update policies and actions, such as Policies SA-12.6 and SA-21.3 and Action SA-12.6.1, as well as Chapters 8.32 and

15.08 of the Municipal Code and Section 20.320.002 (revised) of the Zoning Ordinance to further reduce potential impacts related to the exposure of people residing or working in the area to a safety hazard or excessive noise.

Emergency Response and Evacuation Plans

Cumulative impacts related to emergency response and evacuation plans would be less than significant. The SSFFD manages and maintains emergency plans and training of City staff and community members and focuses on activities that will prepare the community to take care of itself in the period immediately following a local disaster. For example, the CERT program educates volunteers about disaster preparedness for the hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. In addition, San Mateo County has an EOP that is regularly updated. Adjacent jurisdictions also have emergency response plans and emergency evacuation plans. Furthermore, larger regional and statewide resource areas are regulated by State agencies to address larger-scale statewide issues. For these reasons, cumulative impacts associated with emergency response and evacuation plans are less than significant.

Moreover, the General Plan's incremental contribution to these less than significant cumulative impacts would not be significant. To ensure a less than significant contribution to cumulative impacts, development consistent with the General Plan Update will be required to implement all applicable policies and actions during the design review process. As the City receives development applications for subsequent development under the proposed project, those applications will be reviewed by the City for compliance with the policies and actions of the General Plan Update related to emergency response plans and emergency evacuation plans. Additionally, new development under the proposed project would be considered in the context of the San Mateo County EOP and is not expected to impair implementation of or physically interfere with the San Mateo County EOP. Therefore, the proposed project's contribution to cumulative impacts would be considered less than significant.

Level of Cumulative Significance

Less than significant impact.

Source: SHAPE South San Francisco, November 2019.

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Exhibit 3.8-1
Airport Land Use Compatibility

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3.9 - Hydrology and Water Quality

3.9.1 - Introduction

This section of the Draft Program Environmental Impact Report (Draft Program EIR) describes the existing hydrology, drainage, flooding, water quality, and groundwater within the South San Francisco General Plan Update Planning Area (Planning Area). This section evaluates impacts related to hydrology and water quality resulting from implementation of the General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project). Future discretionary projects facilitated by the proposed project will be evaluated for project-specific impacts related to hydrology and water quality at the time they are proposed. Water supply and wastewater conveyance and treatment are discussed in Section 3.15, Utilities and Service Systems. Issues regarding wetlands and waters of the United States are discussed in Section 3.3, Biological Resources.

The following comments related to Hydrology and Water Quality were received in response to the Notice of Preparation (NOP). The comment letters are included in Appendix A.

- States that the new Tsunami Hazard Area Maps and Tsunami Regulatory Zones will be released and that Oyster Point Harbor and Oyster Cove Marina are susceptible to tsunami hazards.
- Recommends that the Draft Program EIR evaluate the proposed project's consistency with the San Mateo County's Sea Level Rise Vulnerability Assessment.
- Recommends that the proposed project avoid increases in stormwater runoff to streams that can cause hydromodification and erosion.
- Requests that the City evaluate impacts of the biotechnology industry and water levels at Oyster Point.

The descriptions and analysis in this section are based, in part, on statements, data, and figures provided by the following reference materials.

- South San Francisco General Plan Update.
- South San Francisco Municipal Code.
- California 2020-2022 Integrated Report Clean Water Act Section 303(d) Proposed Final List of Impaired Water Bodies.[1]

[1] California State Water Resources Control Board (State Water Board). 2022. California 2020-2022 Proposed Final Integrated Report. Website: https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html. Accessed March 29, 2022.

3.9.2 - Environmental Setting

Surface Hydrology

Colma Creek Watershed

The City of South San Francisco is located within the Colma Creek Watershed (16.6 square miles).[2] Colma Creek is a perennial stream within the watershed that trends in a southeasterly direction through the center of the City and is the City's main natural drainage system. The headwaters of Colma Creek originate from San Bruno Mountain located to the north of the City. There are two main tributaries to Colma Creek within the City: Twelve Mile Creek and Spruce Creek. Twelve Mile Creek flows northeast to its confluence with Colma Creek, approximately 500 feet south of the Mission Road/Chestnut Avenue intersection. Spruce Creek flows northeast in the vicinity of Spruce Avenue to its confluence with Colma Creek near Spruce Avenue. Both tributary creeks have been entirely channelized, and many areas have been constructed underground.

San Bruno Creek, which originates in the City of San Bruno, flows north through the southern portion of the City, and drains into the San Francisco Bay in the same location as Colma Creek. A navigable slough is located south of Colma Creek in the southeastern portion of the City. Waterways within the City are shown in Exhibit 3.9-1.

Surface Water Quality

Surface water quality in the City of South San Francisco is monitored by the San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB) (Region 2). The Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin outlines the beneficial water uses that the California State Water Resources Control Board (State Water Board) will protect, and the water quality objectives and strategies for achieving these objectives.

Groundwater Basin Hydrology

South San Francisco is located within the boundaries of the Westside and Visitacion Valley Groundwater Basins.

The Westside Basin is the largest groundwater basin in San Francisco. It is separated from the Lobos Basin to the north by northwest trending bedrock ridge through the northeastern part of Golden Gate Park. The San Bruno Mountains bound the basin on the east. The San Andreas fault and Pacific Ocean form its western boundary and its southern limit is defined by bedrock that separates it from the San Mateo Plain Groundwater Basin. The basin opens to the Pacific Ocean on the northwest and San Francisco Bay on the southeast.[3]

The Visitacion Valley Groundwater Basin is a roughly triangular shaped basin in the San Francisco Bay Hydrologic Region within the City of San Francisco. The San Bruno Mountains bound it on the southwest. It is separated from the Islais Valley Groundwater Basin to the northwest and the South

[2] County of San Mateo. 2022. Colma Creek Watershed. Website: https://www.smcgov.org/publicworks/colma-creek-watershed. Accessed April 24, 2022.

[3] California Department of Water Resources (DWR). 2003. California's Groundwater Bulletin 118. Website: https://cawaterlibrary.net/document/bulletin-118-californias-groundwater-2003/. Accessed March 30, 2022.

San Francisco Groundwater Basin to the northeast by bedrock topographic highs. The San Francisco Bay forms the basin boundary along its eastern extent.[4]

Groundwater flows easterly from Lake Merced in San Francisco toward the San Francisco Bay. Much of the alluvium that underlies the lowland areas of the City of South San Francisco is capable of transmitting groundwater, especially in the southwestern portion of the City. Recharge (percolation back to the water table) is generally concentrated in the immediate near-stream areas where open space is present.

Groundwater Water Quality

Groundwater quality in the South San Francisco area may be impacted by former industrial uses and areas of unconfined waste disposal.

Groundwater in the region is generally of high quality, but faces numerous threats including industrial spills, leaking underground storage tanks, improperly maintained septic systems, urban runoff, and inefficient agricultural operations. Degradation of groundwater quality primarily occurs from industrial chemicals and salt from seawater intrusion. Pollution from nutrients (i.e., nitrate) can be significant in localized areas particularly in areas where fertilizer and wastewater discharges predominate.[5]

Stormwater Runoff

The San Francisco Bay RWQCB administers the National Pollution Discharge Elimination System (NPDES) stormwater permitting program and regulates stormwater in the San Francisco Bay region. The City of South San Francisco is a permittee under the Phase II NPDES Municipal Stormwater Permit and implements the relevant components of the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP).

Stormwater runoff in the City is collected in storm drains and discharged into Colma Creek or the San Francisco Bay. Some stormwater runoff infiltrates into the ground; however, due to the large amount of impervious surfaces within the Planning Area, much of the stormwater flows over land and into existing storm drains. The City maintains all stormwater system facilities within the public right-of-way and adopted drainage easements within the city limits. As part of the Capital Improvement Program, the City is completing a stormwater capture project at Orange Memorial Park in order to divert, treat, and store dry weather urban runoff and wet weather runoff from the Colma Creek channel. A portion of the treated water is being utilized for irrigation of Orange Park, Centennial Way, and the new Civic Campus. The water runoff would also restore groundwater.

In 2019, the City adopted a Green Infrastructure Plan that establishes guidelines for integrating green infrastructure measures into the City in combination with conventional storm drain system (gray) improvements to manage runoff from storm events. This plan would create a more resilient

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[4] California Department of Water Resources (DWR). 2003. California's Groundwater Bulletin 118. Website: https://cawaterlibrary.net/document/bulletin-118-californias-groundwater-2003/. Accessed March 30, 2022.

[5] California State Water Resources Control Board (State Water Board). 2022. Groundwater. Website: https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/groundwater_protection.html#:~:text=Groundwater%20in%20the%20Region%20is%20generally%20of%20high,septic%20systems%2C%20urban%20runoff%2C%20and%20inefficient%20agricultural%20operations. Accessed March 30, 2022.

and sustainable stormwater system that reduces runoff volumes and improves runoff water quality protecting ecology.

Impaired Water Bodies

Section 303(d) of the Federal Clean Water Act (CWA) requires states to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the State to establish water quality based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

The State Water Board and RWQCB assess water quality data for California's waters every 2 years to determine whether the water bodies contain pollutants at levels that exceed protective water quality criteria and standards. The State Water Board adopted the CWA Section 303(d) list of impaired water for the 2020-2022 California Integrated Report on January 19, 2022 (Resolution No. 2022-0006). Upon approval of the 303(d) list portion of the 2020-2022 Integrated Report by the State Water Board, the California Integrated Report is submitted to the United States Environmental Protection Agency (EPA), which may make changes to the 303(d) list before it approves the final 303(d) list for California. Based on assessment, water body segments are placed in one of the categories listed below:

- Category 1: All core beneficial uses are supported and none are known to be impaired.
- Category 2: Insufficient information to determine beneficial use support.
- Category 3: There is insufficient data and/or information to make a beneficial use support determination but information and/or data indicates beneficial uses may be potentially threatened.
- Category 4: At least one beneficial use is not supported but a TMDL is not needed.
- Category 4a: A TMDL has been developed and approved by the EPA for any waterbody-pollutant combination, and the approved implementation plan is expected to result in full attainment of the water quality standard within a specified time frame.
- Category 4b: Another regulatory program is reasonably expected to result in attainment of the water quality standard within a reasonable, specified time frame.
- Category 4c: The non-attainment of any applicable water quality standard for the waterbody segment is the result of pollution and is not caused by a pollutant.
- Category 5: At least one beneficial use is not supported and a TMDL is needed.

The Planning Area has three water bodies listed in the California 2020-2022 Integrated Report Proposed Final 303(d) list of impaired water bodies:[6]

[6] California State Water Resources Control Board (State Water Board) 2022. California Proposed Final 2020-2022 Integrated Report Web Map Application. Website: https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=6cca2a3a1815465599201266373cbb7b. Accessed March 29, 2022.

- Colma Creek–Category 4b segment for trash
- Oyster Point Marina (San Francisco Bay, Lower)–Category 5 for pathogens
- San Francisco Bay, Lower–Category 5 segment for pesticides, toxic organics, metals, trash, and other causes (invasive species)

Flooding and Inundation

Floods are among the most frequent and costly natural disasters. Flooding is often the result of weather events and may cause substantial damage to buildings and infrastructure, as well as public safety concerns. Periodic flooding occurs in the Planning Area but is confined to certain areas along Colma Creek. Colma Creek handles much of the urban runoff generated in the City. Since the City is highly urbanized, runoff levels are high and there is increased potential for flood conditions during periods of heavy rainfall.

Since the establishment of the Colma Creek Flood Control Zone in 1964, the urbanization of the Colma Creek Watershed has seen peak stormwater flow steadily increase. The establishment of the Flood Control Zone in response to regular flooding in the sections of the creek downstream from Orange Memorial Park led to Colma Creek being culverted over up until 2006. Currently several sections of Colma Creek are now restrained by concrete flood control walls raised above street level. Many of the areas around Colma Creek are existing or former industrial uses and present a potential risk for hazardous materials spilling into the watershed and San Francisco Bay. The San Mateo County Flood and Sea Level Rise Resiliency District (formerly the San Mateo County Flood Control District) contributes to the management of flood risk along Colma Creek.

As part of the National Flood Insurance Program (NFIP), the Federal Emergency Management Agency (FEMA) conducts nationwide flood hazard mapping to identify flood-prone areas and to reduce flood damages. The maps identify the flood of that magnitude that have a 1 percent annual chance of being equaled or exceeded, called the “100-year flood.” The flood elevation associated with the 1 percent chance event is referred to as the base flood elevation. Areas predicted to be inundated in a 1 percent chance event are delineated on the Flood Insurance Risk Map (FIRM) and commonly referred to as the “100-year floodplain.” Buildings and other structures in the 100-year flood plain must meet certain requirements to receive a floodplain development permit and to qualify for NFIP insurance and federally backed mortgages.

The majority of the Planning Area is not located within a flood hazard zone, as shown in Exhibit 3.9-2. However, there are some areas located within the 100-year flood zone, including along Colma Creek, the navigable slough, San Bruno Creek, and the San Francisco Bay. Some areas of the Planning Area are located within the 0.2 percent annual chance flood hazard, which is referred to as the “500-year flood zone.”

Sea Level Rise

In the last 100 years, sea level in the Bay Area has risen over 8 inches. Sea levels are rising around the world and are expected to accelerate in the coming decades as oceans continue to warm and glaciers and ice sheets continue to melt. The City is already seeing impacts of sea level rise with King Tides (extremely high tides) causing greater localized flooding in the Oyster Point Marina.

Because future greenhouse gas (GHG) emissions and climate response are not precisely known, the exact sea level rise scenario that could occur in the future is also not known at this time. To accommodate this uncertainty, the California Ocean Protection Council[7] developed the California Sea Level Rise Guidance 2018 Report Update. The guidance provides a standardized process for evaluating potential sea level impacts using a risk-probability approach for plans and projects. It provides estimates of potential sea level rise results based on different emissions scenarios calibrated to local tide stations based on the latest scientific information.

Table 3.9-1 shows sea level rise scenarios for South San Francisco for 2030, 2040, 2050, and 2100. The "likely" sea level rise scenario (a 66 percent probability of occurrence) is appropriate for projects that will not be heavily impacted by flooding, such as the Bay Trail. The "medium-high risk" scenario (1 in 200 chance) has a 0.5 percent chance of occurring. The likelihood that sea level rise could meet or exceed this value is low and this projection may be used for less adaptive, more vulnerable projects or populations that could experience medium to high consequences. This includes coastal housing or commercial development.[8]

Table 3.9-1: Sea Level Rise Scenarios

Year	Likely Risk Flood Height (66% probability)	Medium-High Risk Flood Height (0.5% probability)
2030	0.3 to 0.5 feet	0.8 feet
2040	0.5 to 0.8 feet	1.3 feet
2050	0.6 to 1.1 feet	0.8 to 1.9 feet
2100	1.6 to 3.4 feet	5.7 to 6.9 feet

Source: Ocean Protection Council. 2018. State of California Sea Level Rise Guidance. Website: https://opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3_Exhibit-A_OPC_SLR_Guidance-rd3.pdf. Accessed April 16, 2022.

Exhibit 3.9-3 shows the projected sea level rise and coastal flooding by 2100 along the coast of South San Francisco. A significant number of public facilities and infrastructure, buildings, and other structures are likely to be affected based on a vulnerability assessment conducted by San Mateo County. Portions of U.S. Highway 101 (US-101), Fire Stations 61 and 62, the former Oyster Point Landfill, Bay Trail, South San Francisco-San Bruno Water Quality Control Plant, and the San Francisco International Airport (SFO) are among the large public assets exposed to future sea level rise.[9]

The City continues to participate in multiple studies to understand the potential impact of sea level rise and coastal flooding and how to best adapt. The City, United States Army Corps of Engineers

[7] The California Ocean Protection Council was created pursuant to the California Ocean Protection Act, which was signed into law in 2004 by Governor Arnold Schwarzenegger. The mission of the Ocean Protection Council is to ensure that California maintains healthy, resilient, and productive ocean and coastal ecosystems for the benefit of current and future generations.

[8] Ocean Protection Council. 2018. State of California Sea Level Rise Guidance. Website: https://opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3_Exhibit-A_OPC_SLR_Guidance-rd3.pdf. Accessed April 16, 2022.

[9] Sea Change San Mateo County. 2018. Sea Level Rise Vulnerability Assessment. Website: https://seachangesmc.org/ vulnerability-assessment/. Accessed April 16, 2022.

(USACE), and San Mateo County, in particular, are continuing to study the impacts and would be recommending engineering solutions to prevent flooding. This includes developing adaptation options for Colma Creek.

Tsunami Inundation Zones

Earthquakes can cause a tsunami in the San Francisco Bay. A tsunami is a series of ocean waves caused by sudden movement of the sea floor, typically as a result of major earthquakes, landslide, or volcanic activity. Portions of the City that are low-lying and located in the eastern side and adjacent to San Francisco Bay, are susceptible to inundation from a tsunami as shown in Exhibit 3.9-4.

Harbors and marinas are the most exposed to tsunami because they are on the water. Oyster Point Marina and Oyster Cove Marina are both susceptible to these hazards. Harbor structures, infrastructure, and vessels are all vulnerable to damage and people in and around the harbors could be injured in the event of a tsunami.

Water Supply

Groundwater Supply

The City of South San Francisco is located within the boundaries of the Westside and Visitacion Valley Groundwater Basins. The Bayshore Water District of the California Water Service extracts groundwater from the Westside Basin from five wells located within the service area. Groundwater has historically supplied 20 percent of the Bayshore Water District's water demand.

Climate change may impact local hydrology and affect natural recharge to the local groundwater aquifers and the quantity of groundwater that could be pumped sustainably over the long term. Lower rainfall and/or more intense runoff, increased evaporative losses and warmer and shorter winter seasons can alter natural recharge of groundwater. Salinity intrusion into coastal groundwater aquifers due to sea level rise could interfere with local groundwater uses. Furthermore, additional reductions in imported water supplies would lead to less imported water available for managed recharge of local groundwater basins and potentially more groundwater pumping in lieu of imported water availability.

3.9.3 - Regulatory Framework

Federal

Clean Water Act

The CWA (33 United States Code [USC] § 1251, *et seq*.) is the major federal legislation governing the water quality aspects of construction and operation of the proposed project or variant. The CWA established the basic structure for regulating discharges of pollutants into waters of the United States (not including groundwater) and waters of the State. The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the nation's waters." The CWA establishes the basic structure for regulating the discharge of pollutants into waters of the United States.

The CWA authorizes the EPA to implement pollution control programs. Under the CWA, it is unlawful for any person to discharge any pollutant from a point source into navigable waters, unless an NPDES permit is obtained. In addition, the CWA requires each state to adopt water quality standards for receiving water bodies and to have those standards approved by the EPA. Water quality standards consist of designated beneficial uses for a particular receiving water body (e.g., wildlife habitat, agricultural supply, fishing), along with water quality objectives necessary to support those uses.

Responsibility for protecting water quality in California resides with the State Water Board and nine RWQCBs. The State Water Board establishes Statewide policies and regulations for the implementation of water quality control programs mandated by federal and State water quality statutes and regulations. The RWQCBs develop and implement water quality control plans (basin plans) that consider regional beneficial uses, water quality characteristics, and water quality problems. Water quality standards applicable to the proposed project are listed in the San Francisco Bay RWQCB Basin Plan.

Section 303—Water Quality Standards and Total Maximum Daily Loads

Section 303(c)(2)(b) of the CWA requires states to adopt water quality standards for all surface waters of the United States based on the water body's designated beneficial use. Where multiple uses exist, water quality standards must protect the most sensitive use. Water quality standards are typically numeric, although narrative criteria based on biomonitoring methods may be employed where numerical standards cannot be established or where they are needed to supplement numerical standards.

CWA Section 303(d) requires states and authorized Native American tribes to develop a list of water quality–impaired segments of waterways. The list includes waters that do not meet water quality standards necessary to support a waterway's beneficial uses even after the minimum required levels of pollution control technology have been installed. Listed water bodies are to be priority ranked for development of a TMDL. A TMDL is a calculation of the TMDL (amount) of a pollutant that a water body can receive on a daily basis and still safely meet water quality standards. The TMDLs include waste load allocations for urban stormwater runoff as well as municipal and industrial wastewater discharges, with allocations apportioned for individual Multiple Separate Storm Sewer Systems (MS4s) and wastewater treatment plants, including those in South San Francisco. For stormwater, load reductions would be required to meet the TMDL waste load allocations within the 20 years required by the TMDLs.

The State Water Board, RWQCBs, and EPA are responsible for establishing TMDL waste load allocations and incorporating approved TMDLs into water quality control plans, NPDES permits, and Waste Discharge Requirements (WDRs) in accordance with a specified schedule for completion. The San Francisco Bay RWQCB develops TMDLs for the South San Francisco area.

Section 401—Water Quality Certification

Section 401 of the CWA requires compliance with State water quality standards for actions within State waters. Under CWA Section 401, an applicant for a Section 404 permit (to discharge dredged or fill material into waters of the United States) must first obtain a certificate from the appropriate agency stating that the fill is consistent with the State's water quality standards and criteria. In

California, the State Water Board delegates authority to either grant water quality certification or waive the requirements to the nine RWQCBs. The San Francisco Bay RWQCB is responsible for the project site.

Section 402—National Pollution Discharge Elimination System Permits

The RWQCBs administer the NPDES stormwater permitting program, under Section 402(d) of the federal CWA, on behalf of EPA. The objective of the NPDES program is to control and reduce levels of pollutants in water bodies from discharges of municipal and industrial wastewater and stormwater runoff. CWA Section 402(d) establishes a framework for regulating nonpoint source stormwater discharges (33 USC § 1251). Under the CWA, discharges of pollutants to receiving water are prohibited unless the discharge complies with an NPDES permit. The NPDES permit specifies discharge prohibitions, effluent limitations, and other provisions, such as monitoring deemed necessary to protect water quality based on criteria specified in the National Toxics Rule (NTR), the California Toxics Rule (CTR), and the Basin Plan.

Discharge prohibitions and limitations in an NPDES permit for wastewater treatment plants are designed to maintain public health and safety, protect receiving water resources, and safeguard the water's designated beneficial uses. Discharge limitations typically define allowable effluent quantities for flow, biochemical oxygen demand, total suspended matter, residual chlorine, settleable matter, total coliform, oil and grease, pH, and toxic pollutants. Limitations also typically encompass narrative requirements regarding mineralization and toxicity to aquatic life. Under the NPDES permits issued to the city/county to operate the treatment plants, the city/county is required to implement a pretreatment program. This program must comply with the regulations incorporated in the CWA and the General Pretreatment Regulations (Code of Federal Regulations [CFR] Title 40, Part 403 [40 CFR 403]).

Section 404—Permitting Discharges of Dredge or Fill Material

Section 404 of the CWA regulates temporary and permanent fill and disturbance of wetlands and waters of the United States. Under Section 404, the discharge (temporary or permanent) of dredged or fill material into waters of the United States, including wetlands, typically must be authorized by the USACE through either the Nationwide Permit (general categories of discharges with minimal effects) or the Individual Permit.

River and Harbors Act Section 10

Section 10 of the Rivers and Harbors Act of 1899 requires that regulated activities conducted below the ordinary high-water elevation of navigable waters of the United States be approved and permitted by the USACE. Regulated activities include the placement or removal of structures, work involving dredging, disposal of dredged material, filling, excavation, or any other disturbance of soils/sediments or modification of a navigable waterway. Navigable waters of the United States are those waters of the United States that are subject to the ebb and flow of the tide shoreward to the mean high-water mark and/or are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce. Section 10 also regulates tributaries and backwater areas that are associated with navigable waters of the United States and are located below the ordinary high-water elevation of the adjacent navigable waterway.

A project proponent can apply for a permit/letter of permission for work regulated under Section 404 (CWA) and Section 10 (Rivers and Harbors Act) by completing and submitting one application form. An application for a USACE permit will serve as an application for both Section 404 and Section 10 permits.

Federal Antidegradation Policy

The federal antidegradation policy is designed to protect existing water uses, water quality, and national water resources. The federal policy directs states to adopt a Statewide policy that includes the following primary provisions:

- Existing instream uses and the water quality necessary to protect those uses shall be maintained and protected.
- Where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the State finds that allowing lower water quality is necessary for important local economic or social development.
- Where high-quality waters constitute an outstanding national resource, such as waters of national and State parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

National Toxics Rule and California Toxics Rule

In 1992, the EPA promulgated the NTR under the CWA to establish numeric criteria for priority toxic pollutants for 14 states to bring all states into compliance with the requirements of CWA Section 303(c)(2)(B). The NTR established water quality standards for 42 pollutants not covered under California's Statewide water quality regulations at that time. Because of the court-ordered revocation of California's Statewide basin plans in September 1994, the EPA initiated efforts to promulgate additional federal water quality standards for California. In May 2000, the EPA issued the CTR, which includes all the priority pollutants for which the EPA has issued numeric criteria not included in the NTR.

Executive Order 11988

Executive Order 11988, "Floodplain Management," directs all federal agencies to avoid, to the extent possible, long- and short-term adverse impacts of occupancy and modification of floodplains, and to avoid supporting development in a floodplain either directly or indirectly wherever there is a practical alternative. Compliance requirements are outlined in 23 Code of Federal Regulations 650, Subpart A, "Location and Hydraulic Design of Encroachment on Floodplains."

If a project involves significant encroachment into the floodplain, the final environmental document must include:

- The reasons why the proposed action must be located in the floodplain;
- Alternatives considered and the reasons they were not practical; and
- A statement indicating whether the action conforms to applicable State or local floodplain protection standards.

National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 were enacted to reduce the need for flood protection structures and limit disaster relief costs by restricting development in floodplains. FEMA, established in 1979, is responsible for predicting hazards from flooding events and forecasting the level of inundation under various conditions. As part of its duty to develop standards for delineating fluvial and coastal floodplains, FEMA provides information on FIRMs about the potential for flood hazards and inundation and, where appropriate, designates regions as Special Flood Hazard Areas (SFHAs). SFHAs are defined as areas that have a 1 percent chance of flooding in a given year.

National Flood Insurance Program

As part of the NFIP, FEMA conducts nationwide flood hazard mapping to identify flood-prone areas and to reduce flood damages. The maps identify the flood of that magnitude that have a 1 percent annual chance of being equaled or exceeded, called the "100-year flood." The NFIP also enables property owners in participating communities to purchase insurance as protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages.

National Tsunami Hazard Mitigation Program

The National Tsunami Hazard Mitigation Program (NTHMP) is a coordinated U.S. national effort to mitigate the impact of tsunamis through public education, community response planning, hazard assessment, and warning coordination. NTHMP activities affect, either directly or indirectly, everyone in the United States, including coastal residents and visitors, emergency managers, land-use planners, elected officials, educators, government and business organizations, the military, and the tourism and maritime industries.

The NTHMP is led by a Coordinating Committee made up of representatives from its partner organizations. This committee guides the work of subcommittees established to address three key functions of the NTHMP: hazard assessment, warning guidance, and mitigation (sustained action to reduce or eliminate the long-term risk to human life and property). To support, supplement, and implement the work of these subcommittees, Congress authorized the National Oceanic and Atmospheric Administration (NOAA) to provide financial assistance to NTHMP partner states for tsunami-related activities.

Tsunami Warning, Education, and Research Act of 2017

United States Code Title 33 Navigation and Navigable Waters Chapter 45–Tsunami Warning and Education Sections 3201–3208 Incorporates unrepealed content from Tsunami Warning and Education Act enacted as Title VIII of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (Public Law 109–479; 33 USC 3201 *et seq*.) and additions and modifications of content from Tsunami Warning, Education, and Research Act of 2017, part of the Weather Research and Forecasting Innovation Act of 2017, (Public Law 115-25; 33 USC 3201 *et seq*.). The legislation authorizes establishment of a program to provide tsunami detection, forecasting, and warnings for the Pacific and Arctic Ocean regions and for the Atlantic Ocean region, including the Caribbean Sea and the Gulf of Mexico.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act) is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State must adopt water quality policies, plans, and objectives that protect the State's waters for the use and enjoyment of the people. Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The RWQCBs are required to formulate and adopt basin plans for all areas in the region and establish water quality objectives in the plans. The Porter-Cologne Act sets forth the obligations of the State Water Board and RWQCBs to adopt and periodically update basin plans. The San Francisco Bay RWQCB is responsible for the project site.

Basin plans are the regional water quality control plans required by both the CWA and the Porter-Cologne Act that establish beneficial uses, water quality objectives, and implementation programs for each of the nine regions in California. The Act also requires waste dischargers to notify the RWQCBs of their activities by filing reports of waste discharge and authorizes the State Water Board and RWQCBs to issue and enforce WDRs, NPDES permits, CWA Section 401 water quality certifications, or other approvals. The RWQCBs are also authorized to issue waivers to reports of waste discharge and WDRs for broad categories of "low threat" discharge activities that have minimal potential to cause adverse water quality effects when implemented according to prescribed terms and conditions.

California Code of Regulations (Wetlands and Waters Definition)

The State Water Board indicates that no single accepted definition of wetlands exists at the State level, and that the RWQCBs may have different requirements and levels of analysis regarding the issuance of water quality certifications. According to the State Water Board, an area is a wetland if, under normal circumstances:[10]

(1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both;

(2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and

(3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.[11]

Under California State law, waters of the State mean "any surface water or groundwater, including saline waters, within the boundaries of the State." As such, water quality laws apply to both surface water and groundwater. After the U.S. Supreme Court decision in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (53 USC 159), the Office of Chief Counsel of the State

[10] Normal circumstances are the soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed. The determination of whether normal circumstances exist in a disturbed area involves an evaluation of the extent and relative permanence of the physical alteration of wetland hydrology and hydrophytic vegetation, and consideration of the purpose and cause of the physical alterations to hydrology and vegetation.

[11] California State Water Resources Control Board (State Water Board). 2021. State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Adopted April 2, 2019 and Revised April 6, 2021.

Water Board released a legal memorandum confirming the State's jurisdiction over isolated wetlands. The memorandum stated that under the Porter-Cologne Act, discharges to wetlands and other waters of the State are subject to State regulation, and this includes isolated wetlands. In general, the State Water Board regulates discharges to isolated waters in much the same way as it does for waters of the United States, using the Porter-Cologne Act rather than CWA authority.

National Pollutant Discharge Elimination System

The NPDES permits all involve similar processes, which include submitting notices of intent for discharging to water in areas under the San Francisco Bay RWQCB's jurisdiction and implementing Best Management Practices (BMPs) to minimize those discharges. The San Francisco Bay RWQCB may also issue site-specific WDRs, or waivers to WDRs, for certain waste discharges to land or waters of the State.

Construction Activity

The State Water Board stormwater general permit for construction activity (Order 2009-009-DWQ, as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ) applies to all construction activities that would disturb 1 acre of land or more. Construction activities subject to the general construction activity permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters.

Through the NPDES and WDR processes, the State Water Board seeks to ensure that the conditions at a project site during and after construction do not cause or contribute to direct or indirect impacts on water quality (i.e., pollution and/or hydromodification) upstream and downstream. To comply with the requirements of the Construction General Permit, the project applicant must file a Notice of Intent (NOI) with the State Water Board to obtain coverage under the permit; prepare a Storm Water Pollution Prevention Plan (SWPPP); and implement inspection, monitoring, and reporting requirements appropriate to the proposed project's risk level as specified in the SWPPP. The SWPPP includes a site map, describes construction activities and potential pollutants, and identifies BMPs that will be employed to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources, such as petroleum products, solvents, paints, and cement. The permit also requires the discharger to consider using post-construction permanent BMPs that will remain in service to protect water quality throughout the life of the project. All NPDES permits also have inspection, monitoring, and reporting requirements.

Project sites served by the combined sewer system are not required to obtain coverage under the NPDES Construction General Permit.

Industrial General Stormwater Permit

The Statewide stormwater NPDES permit for general industrial activity (Order 2014-0057-DWQ, superseding Order 97-03-DWQ) regulates discharges associated with 10 broad categories of industrial activities, such as operation of wastewater treatment works, and with recycling facilities. The industrial general permit requires the implementation of Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology to achieve performance standards. The permit also requires development of a SWPPP that identifies the site-specific sources of

pollutants and describes the measures at the facility applied to reduce stormwater pollution. A monitoring plan is also required.

Stormwater

In November 1990, the EPA published regulations establishing NPDES permit requirements for municipal and industrial stormwater discharges. Phase I of the permitting program applied to municipal discharges of stormwater in urban areas where the population exceeded 100,000 persons. Phase II of the NPDES stormwater permit regulations, which became effective in March 2003, required that NPDES permits be issued for construction activity for projects disturbing 1–5 acres. Phase II of the municipal permit system (known as the NPDES General Permit for Small MS4s, Order No. 2003-0005-DWQ as amended by 2013-0001-DWQ) required small municipalities of fewer than 100,000 persons to develop stormwater management programs. This permit authorizes discharges of stormwater and some categories of non-stormwater that are not "significant contributors of pollutants."

California Toxics Rule and State Implementation Policy

The CTR, presented in 2000 in response to requirements of EPA's NTR, establishes numeric water quality criteria for approximately 130 priority pollutant trace metals and organic compounds. The CTR criteria are regulatory criteria adopted for inland surface waters, enclosed bays, and estuaries in California that are on the CWA Section 303(c) list for contaminants. The CTR includes criteria for the protection of aquatic life and human health. Human health criteria (water- and organism-based) apply to all waters with a municipal and domestic water supply beneficial use designation as indicated in the basin plans. The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, also known as the State Implementation Policy, was adopted by the State Water Board in 2000. It establishes provisions for translating CTR criteria, NTR criteria, and basin plan water quality objectives for toxic pollutants into:

- NPDES permit effluent limits,
- Effluent compliance determinations,
- Monitoring for 2,3,7,8-tcdd (dioxin) and its toxic equivalents,
- Chronic (long-term) toxicity control provisions,
- Site-specific water quality objectives, and
- Granting of effluent compliance exceptions.

The goal of the State Implementation Plan is to establish a standardized approach for permitting discharges of toxic effluent to inland surface waters, enclosed bays, and estuaries throughout the State.

California Code of Regulations (Vector Control)

In California, local vector control agencies have the authority to conduct surveillance for vectors, prevent the occurrence of vectors, and abate production of vectors (California Health and Safety Code § 2040). Vector control agencies also have authority to participate in review, comment, and make recommendations regarding local, State, or federal land use planning and environmental quality processes, documents, permits, licenses, and entitlements for projects and their potential effects with respect to vector production (California Health and Safety Code § 2041). Additionally,

agencies have broad authority to influence landowners to reduce or "abate" the source of a vector problem. Agencies have authority to "abate" vector sources on private and publicly owned properties. (California Health and Safety Code § 2060-2065).

Tsunami Hazard Area Maps

The California Geological Survey provides Tsunami Hazard Area Maps to assist cities and counties in identifying their tsunami hazards for tsunami response planning. The maps are intended for local jurisdictional coastal tsunami hazard planning uses.

Regional

San Francisco Bay Conservation and Development Commission

The San Francisco Bay Conservation and Development Commission (BCDC) has jurisdiction over all areas of San Francisco Bay that are subject to tidal action. (Tidal action is defined by the shoreline that extends up to mean high-water mark, except in marsh areas, where BCDC's jurisdiction extends to 5 feet above mean sea level.) The BCDC also has "shoreline band" jurisdiction over an area 100 feet wide inland and parallel to the shoreline. For projects within BCDC jurisdiction, permits may be required, depending on the nature of the activity. Those projects requiring a permit must comply with the requirements of the McAteer-Petris Act and the San Francisco Bay Plan. The City of South San Francisco is located within Plan Map 6, Central South Bay.[12]

Association of Bay Area Governments Hazard Mitigation Plan

The Association of Bay Area Governments (ABAG) multijurisdictional Local Hazard Mitigation Plan for the San Francisco Bay Area was updated in 2010 in partnership with the BCDC. Adapting to Rising Tides Program to support local governments in the regional plan for existing and future hazards of climate change. This detailed 5-year plan identifies potential natural and human-made hazards, assesses their potential risks, and includes mitigation methods to reduce risks. The potential hazards identified in the plan include earthquakes and liquefaction, wildfires, floods, drought, solar storms, dam or levee failure, disease outbreak, freezes, wind, heat, thunder and lightning storms, siltation, tornadoes, hazardous materials, slope failure and mudflows, and other hazards. Similarly, mitigation measures include hazard event planning, emergency preparedness coordination, education, facility upgrades, and monitoring actions.

San Mateo County Multijurisdictional Local Hazard Mitigation Plan

The San Mateo County 2021 Multijurisdictional Local Hazard Mitigation Plan (LHMP) is a large regional and cross-jurisdictional effort to plan for the reduction of risk from natural and man-made disasters. The LHMP assesses hazard vulnerabilities and identifies mitigation actions that jurisdictions will pursue in order to reduce the level of injury, property damage, and community disruption that might otherwise result from such events. The LHMP addresses natural and human-

[12] San Francisco Bay Conservation and Development Commission (BCDC). 2020. San Francisco Bay Plan. Website: https://www.bcdc.ca.gov/pdf/bayplan/bayplan.pdf#page=109. May 5.

caused hazards, including flooding, drought, wildfire, landslides, severe weather, terrorism, cyber threats, pandemic, and the impact of climate change on hazards, as well as other hazards.[13]

San Mateo Countywide Stormwater Pollution Prevention Program

The SMCWPPP was established in 1990 to reduce the pollution carried by stormwater into local creeks, the San Francisco Bay, and the Pacific Ocean. The program is a partnership of the City/County Association of Governments (C/CAG), each incorporated City and town in the county, and the County of San Mateo, which share a common NPDES permit. The CWA and the California Porter-Cologne Water Quality Control Act require that large urban areas discharging stormwater into the San Francisco Bay, or the Pacific Ocean have an NPDES permit to prevent harmful pollutants from being dumped or washed by stormwater runoff, into the stormwater system, then discharged into local waterbodies. San Mateo, Santa Clara, Alameda, Marin, Sonoma, Solano, San Francisco, Fairfield/Suisun, Vallejo, and Contra Costa Counties have each obtained these permits. The Municipal Regional Permit (MRP) outlines the State's requirements for municipal agencies in San Mateo County to address the water quality and flow-related impacts of stormwater runoff. Some of these requirements are implemented directly by municipalities while others are addressed by the SMCWPPP on behalf of all the municipalities.[14]

Local

South San Francisco General Plan Update

The General Plan Update includes the following relevant policies and actions that assist in reducing or avoiding potential impacts related to hydrology and water quality:

Community Resilience Element

Action CR-1.3.3 Require multi-hazard real estate disclosure. Enact an ordinance to require real estate disclosures of all hazards identified in the Hazard Mitigation Plan, including hazards associated with anticipatory sea level rise and flooding, geologic hazards, groundwater inundation, or wildfire for commercial and residential properties, including ownership and rental.

Policy CR-2.1 Use best available sea level rise projections. Use the best available science for sea level rise projections from the State and regional efforts in accordance with the State of California Sea Level Rise Guidance. Define the lifespan of development for temporary structures, residential or commercial structures, and critical infrastructure.

Policy CR-2.2 Implement a variety of adaptation solutions. Pursue a comprehensive shoreline management plan that uses a variety of adaptation solutions to protect the shoreline and enhance ecosystem resilience.

[13] San Mateo County. 2021. San Mateo County Multijurisdictional Local Hazard Mitigation Plan. Website: https://cmo.smcgov.org/multijurisdictional-local-hazard-mitigation-plan. Accessed February 1, 2022.

[14] San Mateo Countywide Water Pollution Prevention Program (SMCWPPP). 2022. About the Flows to Bay Program. Website: https://www.flowstobay.org/about/who-we-are/about-the-flows-to-bay-program/. Accessed April 13, 2022.

Action CR-2.2.1 Pursue shoreline protection for existing and future development. Continue ongoing collaboration with the US Army Corps of Engineers to protect existing and future development by raising levees or seawalls in accordance with the Continuing Authorities Program Study. Implement any future City-prepared sea level rise adaptation plan for the Oyster Point Marina and landfill.

Action CR-2.2.2 Use nature-based solutions for ecosystem resilience. Explore nature-based solutions appropriate for the South San Francisco shoreline, particularly at the mouth of Colma Creek, to provide protection for the built environment and ecosystems.

Policy CR-2.3 Use green infrastructure to reduce flooding. Prioritize green infrastructure in the Colma Creek Watershed to reduce flooding in developed areas through continually updated site-specific design guidelines, low impact development, and design standards for public infrastructure projects.

Policy CR-2.4 Site municipal buildings and facilities at higher elevations. Site new municipal buildings, facilities, and critical infrastructure at higher elevations, consistent with the State of California Sea Level Rise Guidance.

Action CR-2.4.1 Conduct Fire Station 61 and 62 relocation feasibility study. Evaluate the feasibility of relocating Fire Station 61 and 62 outside of the flood zone.

Policy CR-2.5 Require floodproofing for new development in sea level rise inundation zones. Require new development to account for sea level rise in all project applications. This includes:

- Identifying areas of a parcel subject to flooding by type of flooding, including inundation, creek, and groundwater and by the potential depth of flooding.
- Raising base floor elevation above the Federal Emergency Management Agency Base Flood Elevation to include sea level rise projections expected for the lifetime of the project.
- Locating mechanical equipment, such as boilers, chillers, and air handlers for ventilation on the roof to ensure operation during flooding.

Policy CR-2.8 Partner with public and quasi-public agencies to minimize the impacts of sea level rise. Partner with regional agencies to evaluate and address sea level rise and flooding on critical infrastructure, including but not limited to:

- With PG&E and Peninsula Clean Energy to assess vulnerability of electricity and natural gas infrastructure.
- With Caltrans and neighboring jurisdictions on measures to protect US-101.
- With Caltrain and BART on measures to protect the rail corridors.
- With the regional groundwater study to understand how and where groundwater change may impact future development and infrastructure.

Policy CR-3.1 Develop Colma Creek adaptation solutions. Continue to work with San Mateo County Flood and Sea Level Rise Resiliency District on developing and implementing adaptation options for Colma Creek. Restore creek ecologies and create transitional habitat zones to build resilience and ecosystem services.

Action CR-3.1.1 Implement Colma Creek adaptation pilot. Develop a program to work with public and private landowners to decrease the risk of flooding by implementing engineered and nature-based shoreline protection projects in coordination with watershed management projects that reduce and/or store runoff during rainfall events and improve the condition of the flood plain.

Policy CR-4.3 Discourage hillside area development on slopes more than 30 percent. Discourage development on steep hillside areas more than 30 percent grade. Development of hillside sites should follow existing contours to the greatest extent possible. Grading should be kept to a minimum.

Environmental and Cultural Stewardship Element

Policy ES-2.1 Protect marsh and wetland habitat. Protect and expand existing marsh and wetland habitat to improve water quality, adapt to climate change, and provide habitat for wildlife.

Policy ES-2.2 Maintain development standards adjacent to the San Francisco Bay to support habitat. Maintain standards and guidelines for new construction within 150 feet of San Francisco Bay that support the health of the Bay. This policy includes:

- Requiring no net new impervious areas.
- Maintaining (or increasing) building setbacks to support habitat areas and adaptation.
- Requiring new construction to construct bioswales or similar features to treat runoff before it enters the Bay.
- Requiring low intensity lighting to reduce the amount of light reaching sensitive habitat.
- Using a planting palette consisting of native species and species that provide valuable resources for native wildlife.
- Requiring an assessment as part of the California Environmental Quality Act (CEQA) process to consider wildlife impacts before project approval to continue to protect special-status of species.

Policy ES-3.3 Maintain development standards along Colma Creek to support habitat. Maintain development standards and guidelines for new construction within 80 feet that support urban ecology and ecosystem resilience. Provide project applicants with a process for exemptions and/or offsets under limited circumstances. Standards include:

- Requiring no net new impervious areas.

- Maintaining (or increasing) building setbacks to support habitat areas.
- Encouraging new construction to construct bioswales or similar features to treat runoff before it enters the creek.
- Using a planting palette consisting of native species and species that provide valuable resources for native wildlife.

Policy ES-3.4 Implement stormwater management throughout the Colma Creek Watershed. Continue to implement stormwater management practices across the Colma Creek Watershed, such as the Orange Memorial Park Stormwater Capture Project to improve water quality and increase trash capture.

Policy ES-5.3 Use a waterwise planting palette during new construction. During new construction and landscape renovations, prioritize xeriscaping, low-water-use plants, and native plants, minimizing the total area of high water-use plants (e.g., turf and water features).

Policy ES-5.7 Discourage herbicide and pesticide use. Discourage the use of herbicides and pesticides.

Policy ES-5.8 Design irrigation systems for water conservation. Install weather- or soil moisture-based irrigation controllers in all new development. Cluster plants together with similar water requirements to conserve water. Use the Water Use Classification of Landscape Species (WUCOLS) ratings to establish watering needs.

Policy ES-7.1 Develop and implement a comprehensive watershed management strategy. Partner with regional and local agencies to develop a comprehensive watershed management strategy that identifies programs, partnerships, actions, and incentives that the City and partners can take to protect the City's water resources and aquatic areas. Collaborate with regional agencies and neighboring jurisdictions to manage stormwater, reduce impervious surfaces, and improve water quality in the Colma Creek Watershed.

Policy ES-7.2 Integrate green infrastructure in City projects. Integrate green infrastructure strategies into City-owned landscapes to improve water quality and reduce the need to irrigate landscapes.

Policy ES-7.3 Require stormwater management practices for new and redevelopment projects. Continue to require new development and redevelopment projects to meet federal, State, regional, and local stormwater requirements, including site design, stormwater treatment, stormwater infiltration, peak flow reduction, and trash capture.

Policy ES-7.4 Encourage pervious surfaces. Encourage pervious surfaces in new developments.

Policy ES-8.1 Optimize groundwater recharge in new development. Continue to optimize groundwater recharge from new and redevelopment projects by infiltrating stormwater in accordance with State, regional, and local requirements.

City of South San Francisco Climate Action Plan

The Climate Action Plan includes the following actions that assist in reducing or avoiding impacts related to hydrology and water quality:

Action WW 1.1 Landscaping Water Requirements. Achieve greater water use reductions than WELO by requiring all landscapes obtain a landscape permit, decreasing the size threshold to capture all landscape renovations, adding prescriptive irrigation plant lists, or water budget requirements.

Action WW 1.2 Alternative Water Sources. Explore options at the South San Francisco-San Bruno Water Quality Control Plant for delivering non-potable, recycled water for cooling towers, processes, and irrigation in East of 101 (e.g., flow pipe water). Maximize available non-potable water reuse from Orange Park Stormwater Capture project, at Orange Memorial Park, Centennial Way, and new Civic Campus.

Action WW 1.3 Promote Greywater Systems. Create a streamlined permit process for laundry-to-landscape greywater systems.

Action WW 1.4 Landscaping Plant List. Develop a plant list, landscaping palette for efficiency and habitat/wildlife for new development and landscape retrofits.

Action WW 2.1 Indoor Water Efficiency Standards. Require high-efficiency fixtures in all new construction and major renovations, comparable to CALGreen Tier 1 or 2 standards.

Action CL 1.2 Environmental performance of municipal buildings and facilities. Regularly benchmark the environmental performance of municipal buildings, landscaping, parks and facilities, including energy and water use.

Action CS 2.1 Public Tree Planting. Expand the canopy cover to reach the goals of the Urban Forest Master Plan and increase environmental benefits, prioritizing disadvantaged communities and connected wildlife corridors.

Action CS 3.1 Colma Creek Restoration. Enhance Colma Creek as an ecological corridor, restoring 5 miles of creek ecologies and creating transitional habitat zones to build resilience and ecosystem services. Protect and expand existing marsh and wetland habitat to improve water quality, adapt to climate change, and provide habitat for wildlife.

City of South San Francisco Municipal Code

Chapter 14.04 Stormwater Management and Discharge Control

Section 14.04.132 (Site design measures for non-regulated projects) states that all new development and redevelopment projects are encouraged to include adequate site design measures that include minimizing land disturbance and impervious surfaces. These may include clustering of structures and pavement, directing roof runoff to vegetated areas, use of micro-detention, including distributed landscaped-based detention of stormwater, preservation of open space and/or restoration of riparian areas or wetland as project amenities.

Section 14.04.133 (Site design and stormwater treatment requirements for regulated projects) requires that regulated projects implement the following design strategies on-site:

(a) Limit disturbance of natural water bodies and drainage systems; minimize compaction of highly permeable soils; protect slopes and channels; and minimize impacts from stormwater and urban runoff on the biological integrity of natural drainage systems and water bodies;

(b) Conserve natural areas, including existing trees, other vegetation, and soils;

(c) Minimize impervious surfaces;

(d) Minimize disturbances to natural drainages; and

(e) Minimize stormwater runoff by implementing one or more of the following site design measures:
   (1) Direct roof runoff into cisterns or rain barrels for reuse.
   (2) Direct roof runoff onto vegetated areas.
   (3) Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas.
   (4) Direct runoff from driveways and/or uncovered parking lots onto vegetated areas.
   (5) Construct sidewalks, walkways, and/or patios with permeable surfaces.
   (6) Construct driveways, bike lanes, and/or uncovered parking lots with permeable surfaces.

Section 14.04.134 (Low Impact Development [LID] requirements) states that all regulated projects shall implement LID requirements as specified in NPDES Permit No. CAS612008 to reduce runoff and mimic a site's predevelopment hydrology.

Section 14.04.180 (Reduction of pollutants in stormwater) identifies operational, and construction-related BMPs to reduce pollutants entering the City storm sewer system. For example, for new developments and redevelopments, all construction sites in the City shall implement year-round effective erosion control, run-on and runoff control, sediment control, active treatment systems (as appropriate), good site management, and non-stormwater management through all phases of construction until the site is stabilized by landscaping or the installation of permanent erosion control measures.

Chapter 14.08 Water Quality Control

Chapter 14.08 of the Municipal Code contains several measures to help the City comply with all applicable California Water Code laws and federal laws required by the CWA. This Chapter provides for the regulation of direct and indirect dischargers to the publicly owned treatment works through the issuance of permits to certain nondomestic users and through enforcement of general requirements for all users.

Section 14.08.250 (Excessive discharge) states that it is unlawful to increase the use of process water or, in any way, attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limits contained in the categorical pretreatment standards, or in any other pollutant specific limitation developed by the City or State, except where expressly authorized by an applicable pretreatment standard or requirement. The superintendent may impose mass limitations on users which are using dilution to meet applicable pretreatment standards or requirements, or in other cases where the imposition of mass limitations is appropriate.

Section 14.08.260 (Accidental discharges) states that each user shall provide protection from accidental discharge of prohibited materials or other regulated substances. Facilities to prevent accidental discharge of prohibited materials shall be provided and maintained at the owner or user's own cost and expense. Detailed plans showing facilities and operating procedures to provide this protection shall be submitted to the City for review and shall be approved by the City before construction of the facility. Review and approval of such plans and operating procedures shall not relieve the industrial user from the responsibility to modify the user's facility as necessary to meet the requirements of this chapter. In the case of an accidental discharge, it is the responsibility of the user to immediately telephone and notify the City of the incident. The notification shall include the location of discharge, type of waste, concentration and volume, and corrective actions.

Section 14.08.290 (Harmful discharges) states that the superintendent may suspend the wastewater treatment service or a wastewater discharge permit in order to stop an actual or threatened discharge which presents or may present an imminent or substantial endangerment to the health or welfare of persons or to the environment, threatens to cause interference to the wastewater conveyance system, or causes or threatens to cause the City to violate any condition of its NPDES permit.

Chapter 15.56 Flood Damage Prevention

The purpose of this chapter is to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by legally enforceable regulations applied uniformly throughout the community to all publicly and privately owned land within flood prone, mudslide [i.e., mudflow] or flood-related erosion areas.

Section 15.56.140 (Development permit) requires that a development permit be obtained before any construction or other development occurs within an area of special flood hazard.

Section 15.56.160 (Standards of construction) includes construction standards for all projects within special flood hazard zones, including anchoring, construction materials and methods, elevation and floodproofing.

Section 15.56.170 (Standards for utilities) requires that all new and replacement water supply and sanitary sewage systems be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters. Section 15.56.170 also requires that all on-site waste disposal systems be located to avoid impairment to them, or contamination from them during flooding.

Section 15.56.220 (Coastal high hazard areas) includes standards for construction in coastal high hazard areas. For example, all new construction or other development shall be located on the landward side of the reach of mean high tide. In addition, all new residential and nonresidential construction, including substantial improvements, shall be elevated on adequately anchored pilings or columns and securely anchored to such pilings or columns so that the bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to or above the base flood level.

City of South San Francisco Zoning Ordinance

The following chapters of the South San Francisco Zoning Ordinance, including the new or revised chapters of the Zoning Ordinance that are part of the proposed project, assist in reducing or avoiding impacts related to hydrology and water quality.

Chapter 20.180 Flood Plain/Sea Level Rise Overlay (new)

The Flood Plain/Sea Level Rise (SLR) Overlay District is intended to protect areas projected to be impacted by sea level rise, mitigate the impacts of sea level rise, and protect the health, safety, and welfare of residents of the City by establishing regulations for addressing flooding and other hazards associated with sea level rise.

Section 20.180.003 (Application Required) (new) requires that all new construction, repairs, or alterations receive a Site Clearance prior to issuance of a Building Permit to ensure that the proposed project is consistent with the applicable requirements of this section, except that the Chief Planner may grant an exception for normal maintenance or for required emergency projects to ensure the health and safety of the community. In addition, prior to issuance of a Building Permit, a registered professional engineer retained by the applicant shall certify that the design, specifications, and plans for the construction of shoreline infrastructure are in accordance with the requirements of this Chapter, FEMA guidance, and the Code of Federal Regulations related to the mapping of areas protected by levee systems in place as of the application date.

Section 20.180.005 (Development Standards) (new) includes standards for the Flood Plain/SLR Overlay District related to hydrology and water quality, including a bay access buffer, creek access buffers, levees and sea walls, stormwater runoff and drainage, landscape species, impervious areas, and riparian area protection.

- A bay access buffer extending 100 feet inland from the San Francisco Bay Shoreline is intended to provide an area to accommodate and maintain built and natural shoreline infrastructure for sea level rise protection, environmental enhancement, and public access trails.

- Creek access buffers are intended to provide an area to accommodate and maintain flood protection and public access trail infrastructure. For properties with frontage on Colma Creek or San Bruno Creek, a minimum buffer zone of 35 feet from the top of creek bank is required to accommodate and maintain future infrastructure and a public access trail.
- Levees and sea walls along canals and creeks, armoring shall be living vegetation where possible.
- Levees and sea walls along the shoreline, armoring is restricted to natural materials.
- All developments shall employ low-impact stormwater runoff techniques that mimic natural watershed processes that capture and treat stormwater runoff at its source, and reduce, filter, or slow runoff before entry into the storm drainage system. Systems may include drainage courses, swales, infiltration gardens, and trees to increase evapotranspiration.
- One hundred percent of the drainage from impervious surfaces on the site shall be captured and retained on-site with sufficient storage to keep the first 1.25 inches of rainwater from an individual rain event on-site without discharging onto neighboring properties or rights-of-way unless a regional stormwater management system is available to serve the development and the specific discharges from the site into the system have been approved by the City Public Works Department. On-site retention may include infiltration, rainwater harvesting, or evapotranspiration.
- Planting palettes for landscaping must consist of a minimum 80 percent native species and reflect the composition of native habitat types.
- No net new impervious areas are permitted in designated parks and open spaces within the Flood Plain/SLR Overlay District.
- To minimize disturbance to the creek and vegetation, on the edge of the creek setback the project applicant shall erect a minimum four foot high construction fence prior to the issuance of a grading permit. The fence shall stay in place until a certificate of occupancy is issued.

Chapter 20.300 Lot and Development Standards (revised)

Section 20.300.007 (Landscaping) (revised) includes a number of requirements for new construction or rehabilitated landscapes, including the preparation of a soil management report and grading design plan to reduce runoff.

Section 20.300.010 (Performance Standards) (revised) establishes regulations related to liquid or solid wastes as detailed below.

1. Discharges to Water or Sewers. Liquids and solids of any kind shall not be discharged, whether directly or indirectly, into a public or private body of water, sewage system, watercourse, or into the ground, except in compliance with applicable standards of the California Regional Water Quality Control Board (California Administrative Code, Title 23, Chapter 3 and California Water Code, Division).

2. Solid Wastes. Solid wastes shall be handled and stored so as to prevent nuisances, health, safety and fire hazards, and to facilitate recycling. There shall be no accumulation outdoors of solid wastes conducive to the breeding of rodents or insects, unless stored in closed containers.

Chapter 20.310 Site Building and Design Standards (new)

Section 20.310.002 (General Site and Building Design) (new) includes grading and drainage requirements for all projects throughout the City.

B. Grading
   1. Slopes of Cut/Fill Areas.
      a. Cut surfaces may not exceed 40 percent (two horizontal to one vertical).
      b. Fill slopes may not be constructed on natural slopes steeper than 50 percent and fill surfaces may not exceed 50 percent.
      c. Grading requires conditional approval from the Review Authority where:
         i. Slopes created by grading of the site exceed 30 percent; or
         ii. The grading is within 100 feet of a watercourse (top of bank) or any other water body.
   2. Height of Cut/Fill Areas.
      a. Where the height of the fill area is greater than five feet, new fill shall be benched into sound bedrock or other material as determined by a soils engineer or engineering geologist.
      b. Cut-and-fill banks shall not exceed 30 feet in height, vertically. In the cases of arterial streets, they may exceed 30 feet with the approval of the City Engineer.
   3. Fill Design Requirements.
      a. All ground surface to be filled must be prepared to receive the fill by removing vegetation, noncomplying fill, topsoil and other unsuitable materials, and scarifying to provide a bond with the new fill.
      b. No soils containing hazardous or toxic material of any kind may be used as fill. No rock, broken concrete, asphalt, or similar irreducible materials shall be used for fill.
   4. Slope Stabilization. The faces of cut-and-fill slopes shall be prepared and maintained to control against erosion. This consists of planting, use of armor rock, terracing, water breaks, dams, cribbing, rip rap, or combinations thereof. Protection for the slopes shall be installed prior to final inspection. The building official may require installation of temporary measures as required to protect exposed areas until permanent measures can be taken.
   5. Terraces. Terraces a minimum four feet in width shall be established at not more than 15-foot intervals on all cut or fill slopes to control surface drainage and debris. Where only one terrace is required, it shall be at mid-height.
   6. Dust Control. Contractors performing grading operations within the City where dry conditions or dry admixtures are encountered shall adequately and effectively control dust to prevent spread off-site or onto existing structures on-site. Prior to

commencement of grading operations, the contractor shall furnish details of proposed dust control measures to the building official for approval.

7. Protection of Trees. Construction vehicles and equipment and excavated soils shall be kept away from under the canopy of any trees on the site which are to be preserved.
8. Grading Plan Required. For any grading on a site with a natural slope of 15 percent or greater, a grading plan is required.

C. Drainage

1. All drainage plans that alter the slope of contour of a site's existing drainage pattern required the approval of the City Engineer.
2. Where possible, sites must drain directly into the Bay through drainage outfalls.
3. Cut-and-fill slopes shall be provided with subsurface drainage as necessary for stability. Paved interceptor drains shall be installed along the top of all cut slopes where the tributary drainage area above the slopes toward the cut has a drainage path greater than 40 feet measured horizontally.
4. All drainage facilities shall be designed to carry waters to the nearest drainage way approved by the appropriate jurisdiction.

3.9.4 - Methodology

Impacts to hydrology and water quality resulting from implementation of the proposed project (collectively, the General Plan Update, Zoning Code Amendments, and Climate Action Plan) are discussed below. The impact analysis is based on an assessment of baseline conditions for the Planning Area, including climate, topography, watersheds and surface waters, groundwater, and floodplains. This analysis identifies potential impacts to hydrology and water quality from construction, operation, and maintenance activities related to future development that could occur under the proposed project.

3.9.5 - Thresholds of Significance

According to the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist, to determine whether impacts related to hydrology and water quality are significant environmental effects, the following questions are analyzed and evaluated. Would the proposed project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the proposed project may impede sustainable groundwater management of the basin?

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in substantial erosion or siltation on- or off-site;
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
iv) Impede or redirect flood flows?

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

3.9.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Surface and Groundwater Quality

Impact HYD-1:	**The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.**

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. Because South San Francisco is a fully built city, new development would primarily occur on parcels that already contain some existing homes or businesses, with the majority of potential growth occurring within the East of 101, Lindenville, Downtown, and El Camino planning sub-areas (Chapter 2, Project Description, Exhibit 2-5). Additionally, the proposed project may result in other private and public improvements throughout the City with the potential for environmental effects related to hydrology and water quality (see Sections 2.5.2, 2.5.5, and 2.5.6, Chapter 2, Project Description).

Construction

Development under the proposed project would involve grading, excavation, and removal of vegetative cover that has the potential to result in runoff that contains sediment and other pollutants that could degrade surface and groundwater quality, if not properly controlled. Sources of potential pollution associated with construction include fuel, grease, oil and other fluids, concrete material, sediment, and litter. These pollutants have the potential to result in impacts due to chemical contamination from construction activities and materials that could pose a hazard to the environment or degrade water quality if not properly managed and controlled.

Future development (including redevelopment of existing developed sites) that disturbs one acre or more of soil or that is part of a common plan of development that disturbs one acre or more of soil must obtain permit coverage under the Construction General Permit by filing an NOI and SWPPP with the RWQCB prior to commencement of construction. The SWPPP must describe the site, the facility, erosion and sediment controls, runoff water quality monitoring, means of waste disposal,

implementation of approved local plans, control of construction sediment and erosion control measures, maintenance responsibilities, and non-stormwater management controls. Inspection of construction sites before and after storms is also required to identify stormwater discharge from the construction activity and to identify and implement erosion controls, where necessary.

The General Plan Update includes policies and actions to protect water quality in and around the Planning Area during project construction. Policy ES-7.3 requires new development and redevelopment projects to meet federal, State, regional, and local stormwater requirements, including site design, stormwater treatment, stormwater infiltration, peak flow reduction, and trash capture. Policy ES-2.1 requires the City to protect and expand existing marsh and wetland habitat to improve water quality. Policies ES-2.2 and ES-3.3 require the City to maintain standards for new construction adjacent to the San Francisco Bay and Colma Creek, such as maintaining (or increasing) building setbacks to support habitat areas, which will also assist in protecting water quality during construction. Lastly, Policy ES-3.4 requires the City to continue to implement stormwater management practices across the Colma Creek Watershed, such as the Orange Memorial Park Stormwater Capture Project to improve water quality and increase trash capture.

The South San Francisco Municipal Code contains rules and regulations to protect water quality during construction. Section 14.04.180 (Reduction of pollutants in stormwater) identifies construction-related BMPs to reduce pollutants entering the City storm sewer system. Section 14.04.132 (Site design measures for non-regulated projects) and Section 14.04.133 (Site design and stormwater treatment requirements for regulated projects) requires all new development and redevelopment projects to minimize disturbance of natural water bodies and drainage systems, protect slopes and channels, and conserve natural areas, including existing trees, other vegetation, and soils.

The Climate Action Plan includes actions that would protect water quality during construction. Implementation of Action CS 3.1 would enhance Colma Creek as an ecological corridor, creating transitional habitat zones to build resilience and ecosystem services, which would assist in protecting water quality during construction. Implementation of Action CS 2.1 would expand the canopy cover to reach the goals of the Urban Forest Master Plan, which would also assist in protecting water quality during construction.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, include rules and regulations to protect water quality during construction. Section 20.180.005 (Development Standards) (new) includes standards for the Flood Plain/SLR Overlay District. The standards for construction in these areas, including a bay access buffer, creek access buffers, using living vegetation and natural materials for levees and sea walls, employing low-impact stormwater runoff techniques, retaining 100 percent of drainage from impervious surfacing on-site, using a minimum of 80 percent native species in landscaping, requiring no net new impervious areas, and requiring the installation of fencing during construction to protect riparian areas, will also assist in protecting water quality during construction. For example, by installing fencing along riparian areas, pollution associated with construction such as fuel, grease, oil and other fluids, concrete material, sediment, and litter, would be managed and controlled on-site and not degrade off-site water quality. Section 20.310.002 (General Site and Building Design) (new)

includes grading and drainage requirements for all projects throughout the City, including submittal of a grading plan for any grading on a site with a natural slope of 15 percent or greater, and slope stabilization to control against erosion, which will also assist in protecting water quality during construction.

Compliance with mandatory NPDES permit requirements, adherence to the South San Francisco Municipal Code and Zoning Ordinance, and implementation of General Plan Update and Climate Action Plan policies and actions would ensure that impacts related to water quality degradation from construction activities would be less than significant.

Dewatering

Construction activities associated with future development, including excavation and trenching, may encounter shallow groundwater. If shallow groundwater is encountered, dewatering of the excavation or trenching site may be required. If improperly managed, these dewatering activities could result in discharge of contaminated groundwater. In accordance with the General Waste Discharge Requirements for Extracted Groundwater from Structural Dewatering Requiring Treatment in the San Francisco Bay Region (Order No. R2-2018-0026; General NPDES Permit No. CAG912004), any contaminated groundwater would be treated prior to discharge or disposed of at an appropriate disposal facility or wastewater treatment plant. Also, discharges of dewatered groundwater to a storm drain must be conducted in a manner that complies with the San Francisco Bay RWQCB Order No. R2-2015-0049, MRP. Consistent with California Water Code and the CWA, Section 14.08.290 (Harmful discharges) of the South San Francisco Municipal Code regulates excessive, accidental, and harmful discharges and directs the superintendent to suspend the wastewater treatment service or a wastewater discharge permit in order to stop an actual or threatened discharge in certain circumstances to protect the health or welfare of people or the environment. In addition, Chapter 14.08 of the South San Francisco Municipal Code provides for the regulation of direct and indirect dischargers to the to the publicly owned treatment works through the issuance of permits for certain nondomestic users and through enforcement of general requirements for all users, thereby further ensuring that dewatering activities do not degrade water quality in the Planning Area. For example, Section 14.08.250 (Excessive discharge) directs the superintendent to impose mass limitations on users which are using dilution to meet applicable pretreatment standards or requirements, or in other cases where the imposition of mass limitations is appropriate. Section 4.08.260 (Accidental discharges) requires the submittal of detailed plans showing facilities and operating procedures to provide protection from accidental discharge of prohibited materials or other regulated substances to the City for review. The detailed plans shall be approved by the City before construction of the facility.

Compliance with mandatory NPDES permit requirements and adherence to the South San Francisco Municipal Code would ensure that impacts related to water quality degradation from the discharge of dewatered groundwater would be less than significant.

Operation

New development under the proposed project could add additional areas of impervious surfaces within the Planning Area and could therefore increase the volume of pollutants that are typically

associated with urban runoff into the stormwater. These pollutants can include sediments, petroleum hydrocarbons, pesticides, fertilizers, and heavy metals such as lead, zinc, and copper that tend to build up during the dry months of the year. Precipitation during the early portion of the wet season (generally from November to April) washes away most of these pollutants, resulting in high pollutant concentrations in the initial wet weather runoff. This initial runoff is referred to as the "first flush" of storm events. Subsequent periods of rain would result in less concentrated pollutant levels in the runoff.

The amount and type of runoff generated by the various future projects could potentially be greater than under existing conditions. An increase in impervious surfaces could result in a corresponding increase in urban runoff pollutants and first flush roadway contaminants, as well as an increase in nutrients and other chemicals from landscaped areas. These constituents could result in water quality impacts to on-site and off-site drainage flows to area waterways.

The General Plan Update includes policies and actions intended to protect water quality in and around the Planning Area. Policy ES-7.3 requires new development and redevelopment projects to meet federal, State, regional, and local stormwater requirements, including site design, stormwater treatment, and stormwater infiltration. Policies ES-2.2 and ES-3.3 require the City to maintain standards for new construction adjacent to the San Francisco Bay and Colma Creek, such as constructing bioswales or similar features to treat runoff before it enters the waterway. Policy ES-7.1 requires the City to collaborate with regional agencies and neighboring jurisdictions to manage stormwater, reduce impervious surfaces, and improve water quality in the Colma Creek Watershed. Lastly, Policy ES-7.2 requires the City to integrate green infrastructure in City projects.

The South San Francisco Municipal Code also contains rules and regulations to protect water quality at operation. Section 14.04.134 (LID requirements) requires that all regulated projects implement LID requirements as specified in NPDES Permit No. CAS612008 to reduce runoff and mimic a site's predevelopment hydrology. Section 14.04.180 (Reduction of pollutants in stormwater) identifies operational related BMPs to reduce pollutants entering the City storm sewer system. Section 14.04.132 (Site design measures for non-regulated projects) requires all new development and redevelopment projects to include adequate site design measures to minimize land disturbance and impervious surfaces. These may include clustering of structures and pavement, directing roof runoff to vegetated areas, use of micro-detention, including distributed landscaped-based detention of stormwater, preservation of open space and/or restoration of riparian areas or wetland as project amenities. Section 14.04.133 (Site design and stormwater treatment requirements for regulated projects) requires that regulated projects implement design strategies on-site, including minimizing impervious surfaces, conserving natural areas, and minimizing stormwater runoff.

The Climate Action Plan includes actions that would protect water quality during operation. Implementation of Action CS 3.1 would enhance Colma Creek as an ecological corridor, restoring 5 miles of creek ecologies and creating transitional habitat zones to build resilience and ecosystem services, which will assist in protecting water quality during operation. Implementation of Action CS 2.1 would expand the canopy cover to reach the goals of the Urban Forest Master Plan and would also assist in protecting water quality in the Planning Area.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, include rules and regulations to protect water quality in the Planning Area. Section 20.180.005 (Development Standards) (new) includes standards for the Flood Plain/SLR Overlay District. The standards for construction in these areas, including a bay access buffer, creek access buffers, using living vegetation and natural materials for levees and sea walls, employing low-impact stormwater runoff techniques, retaining 100 percent of drainage from impervious surfacing on-site, using a minimum of 80 percent native species in landscaping, requiring no net new impervious areas, and requiring the installation of fencing during construction to protect riparian areas, will also assist in protecting water quality during operation. Section 20.300.007 (Landscaping) (revised) includes a number of requirements for new construction or rehabilitated landscapes, including the preparation of a soil management report and grading design plan to reduce runoff. Section 20.310.002 (General Site and Building Design) (new) includes grading and drainage requirements for all projects throughout the City, including City Engineer approval of all drainage plans that alter the slope of contour of a site's existing drainage pattern, which would assist in protecting water quality during operation.

Future development under the proposed project would also be required to comply with the CWA and regulations enforced by the RWQCB. In addition, future projects would comply with requirements of the South San Francisco Municipal Code and Zoning Ordinance, and the General Plan Update and Climate Action Plan policies and actions related to water quality. Therefore, future development under the proposed project, at operation, would not violate any water quality standards or WDR or otherwise substantially degrade surface or groundwater quality. As such, implementation of the proposed project would result in a less than significant impact relative to this topic.

Level of Significance

Less than significant impact.

Groundwater Supply/Recharge

Impact HYD-2:	**The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the proposed project may impede sustainable groundwater management of the basin.**

Development under the proposed project could lead to an increased demand for water, which could lead to an increase in groundwater pumping. As described in Section 3.15, Utilities and Service Systems, the City of South San Francisco receives its water supply from two water providers: California Water Service (Cal Water) South San Francisco District and Westborough Water District. Westborough Water District does not rely on groundwater sources. Cal Water has historically pumped groundwater from the Westside Basin to supplement the supply from the San Francisco Public Utilities Commission (SFPUC). Groundwater has historically supplied 10 to 15 percent of the Cal Water South San Francisco District's water demand. The Cal Water South San Francisco Water

District extracts groundwater from the Westside Basin from five wells located within the service area, and groundwater supply is expected to be 100 percent reliable in all year types through 2045.[15]

The City is located within the boundaries of the Westside and Visitacion Valley Groundwater Basins. Much of the alluvium that underlies the lowland areas of the City of South San Francisco is capable of transmitting groundwater, especially in the southwestern portion of the City. Recharge (percolation back to the water table) is generally concentrated in the immediate near-stream areas where open space is present. Subsequent development under the proposed could result in an increase in impervious surfaces, which could reduce stormwater and rainwater infiltration.

The General Plan Update includes policies and actions to maximize infiltration and rainwater retention and minimize impacts to groundwater recharge. Policy ES-7.3 requires new development and redevelopment projects to meet federal, State, regional, and local stormwater requirements, including site design, stormwater treatment, and stormwater infiltration. Policies ES-2.2 and ES-3.3 require the City to maintain standards for new construction adjacent to the San Francisco Bay and Colma Creek, such as requiring no net new impervious areas. Policy ES-7.4 requires the City to encourage pervious surfaces in new developments. Lastly, Policy ES-8.1 requires the City to optimize groundwater recharge from new and redevelopment projects by infiltrating stormwater in accordance with State, regional, and local requirements.

The South San Francisco Municipal Code also contains rules and regulations to maximize stormwater infiltration and rainwater retention and minimize impacts to groundwater recharge. Section 14.04.134 (LID requirements) requires that all regulated projects implement LID requirements as specified in NPDES Permit No. CAS612008 to reduce runoff and mimic a site's predevelopment hydrology. Section 14.04.132 (Site design measures for non-regulated projects) requires all new development and redevelopment projects to include adequate site design measures to minimize land disturbance and impervious surfaces. These may include directing roof runoff to vegetated areas, use of micro-detention, and preservation of open space as project amenities. Section 14.04.133 (Site design and stormwater treatment requirements for regulated projects) requires that regulated projects implement design strategies on-site, including minimizing impervious surfaces, conserving natural areas, and minimizing stormwater runoff.

The Climate Action Plan includes actions to maximize stormwater infiltration and rainwater retention and minimize impacts to groundwater recharge. Implementation of Action CS 3.1 would enhance Colma Creek as an ecological corridor, restoring 5 miles of creek ecologies and creating transitional habitat zones to build resilience and ecosystem services, which would assist in maximizing stormwater infiltration and rainwater retention. Implementation of Action CS 2.1 would expand the canopy cover to reach the goals of the Urban Forest Master Plan, which would also increase stormwater infiltration and rainwater retention throughout the Planning Area, thereby minimizing impacts to groundwater recharge.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, include rules and regulations to maximize stormwater infiltration and

[15] California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. South San Francisco District. Website: https://www.calwater.com/docs/uwmp2020/SSF_2020_UWMP_FINAL.pdf. Accessed April 20, 2022.

rainwater retention and minimize impacts to groundwater recharge. Section 20.180.005 (Development Standards) (new) includes standards for the Flood Plain/SLR Overlay District. The standards for construction in these areas, including a bay access buffer, creek access buffers, using living vegetation and natural materials for levees and sea walls, employing low-impact stormwater runoff techniques, retaining 100 percent of drainage from impervious surfacing on-site, using a minimum of 80 percent native species in landscaping, requiring no net new impervious areas, and requiring the installation of fencing during construction to protect riparian areas, will assist in maximizing infiltration and rainwater retention. For example, protecting riparian areas and establishing buffers along the bay and creek, allows for stormwater infiltration and rainwater retention in these areas, minimizing impacts to groundwater recharge. Section 20.300.007 (Landscaping) (revised) includes a number of requirements for new construction or rehabilitated landscapes, including the preparation of a soil management report and grading design plan to reduce runoff, which would maximize stormwater infiltration and rainwater retention and minimize impacts to groundwater recharge.

Future development under the proposed project would be required to comply with requirements of the South San Francisco Municipal Code and Zoning Ordinance, and the General Plan Update and Climate Action Plan policies and actions related to maximizing infiltration and rainwater retention. Therefore, future development under the proposed project would not substantially interfere with groundwater recharge or impede groundwater management of the basin, and impacts would be less than significant.

Level of Significance

Less than significant impact.

Drainage Leading to Erosion/Siltation, Flooding, Additional Sources of Polluted Runoff, or Impedance of Flood Flows

Impact HYD-3: **The proposed project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:**

- **i) Result in substantial erosion or siltation on- or off-site.**
- **(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.**
- **(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.**
- **(iv) impede or redirect flood flows.**

i) Erosion and Siltation

Development under the proposed project discourages development on hillsides with slopes more than 30 percent grade (General Plan Update Policy CR-4.3), which have a higher potential for soil erosion. Nonetheless, future development would involve construction activities such as stockpiling, grading, excavation, paving, and other earth-disturbing activities. Loose and disturbed soils are more

prone to erosion and loss of topsoil by wind and water. This could result in an increase in stormwater runoff and the potential to cause erosion or sedimentation in drainage swales and creeks.

Construction activities that disturb one or more acres of land surface are subject to the Construction General Permit adopted by the State Water Board. Compliance with the permit requires each qualifying development project to file an NOI with the State Water Board. Permit conditions require development of a SWPPP, which must describe the site, the facility, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, control of construction sediment and erosion control measures, maintenance responsibilities, and non-stormwater management controls. Inspection of construction sites before and after storms is also required to identify stormwater discharge from the construction activity and to identify and implement erosion controls, where necessary.

The South San Francisco Municipal Code and Zoning Ordinance set forth rules and regulations to manage stormwater, which would also reduce erosion and siltation on- or off-site caused by stormwater runoff. For example, Section 14.04.134 of the Municipal Code states that all regulated projects shall implement LID requirements to reduce runoff and mimic a site's predevelopment hydrology. Section 20.300.007 (revised) includes a number of requirements for new construction or rehabilitated landscapes, including the preparation of a soil management report and grading design plan to reduce runoff. Section 20.310.002 (General Site and Building Design) (new) of the Zoning Ordinance includes grading and drainage requirements for all projects throughout the City, including submittal of a grading plan for any grading on a site with a natural slope of 15 percent or greater, and slope stabilization to control against erosion. Future development under the proposed project would be required to comply with these rules and regulations to manage stormwater, which would also reduce erosion and siltation on- or off-site caused by stormwater runoff.

In addition to compliance with mandatory CWA and South San Francisco Municipal Code and Zoning Ordinance requirements, adherence to General Plan Update policies and actions would further reduce the potential for erosion and off-site siltation from construction-related soil disturbance. For instance, Policies ES-2.2 and ES-3.3 require new development to construct bioswales or similar features to treat runoff. Policy ES-7.4 requires the City to encourage pervious surfaces in new developments. Policy CR-4.3 requires the City to discourage development on steep hillside areas greater than a 30 percent grade and limit grading to a minimum in such areas. As such, potential impacts related to erosion and off-site siltation would be reduced to less than significant levels.

ii) Surface Runoff

Development under the proposed encourages infill development and discourages development on hillsides. New development or redevelopment that would be allowed by the proposed project could increase the total impervious area within the Planning Area and increase stormwater runoff, which could result in flooding.

However, as described previously, implementation of General Plan Update and Climate Action Plan policies and actions and adherence to the requirements of the South San Francisco Municipal Code and Zoning Ordinance would maximize the on-site infiltration capacity for new development and redevelopment projects and would minimize the off-site runoff that would leave those project sites.

For example, Chapter 14.04 of the South San Francisco Municipal Code contains regulations that seek to minimize impervious surfaces, minimize impacts from stormwater runoff, and follow LID requirements. Section 20.310.002 (new) of the South San Francisco Zoning Ordinance requires City Engineer approval of all drainage plans that alter the slope of contour of a site's existing drainage pattern. General Plan Update policies and actions would further reduce impacts from surface runoff, including Policy ES-7.3 requires new development and redevelopment projects to meet federal, State, regional, and local stormwater requirements, including site design, stormwater treatment, and stormwater infiltration. Policies ES-2.2 and ES-3.3 require the City to maintain standards for new construction adjacent to the San Francisco Bay and Colma Creek, such as requiring no net new impervious areas. Policy ES-7.4 requires the City to encourage pervious surfaces in new developments. Green infrastructure policies prioritize green infrastructure in the Colma Creek Watershed to reduce flooding in developed areas through continually updated site-specific design guidelines, LID, and design standards for public infrastructure projects. Lastly, implementation of Climate Action Plan Action CS 3.1, which would enhance Colma Creek as an ecological corridor, and implementation of Action CS 2.1, which would expand the canopy cover to reach the goals of the Urban Forest Master Plan, would assist in maximizing infiltration and rainwater retention throughout the Planning Area, thereby reducing impacts from surface runoff.

Compliance with existing regulations and the General Plan Update and Climate Action Plan policies and actions, as well as adherence to the South San Francisco Municipal Code and Zoning Ordinance, would maximize stormwater infiltration and rainwater retention, which would in turn reduce stormwater runoff. Therefore, impacts related to surface water and flooding would be considered less than significant.

iii) Exceedance of Storm Drain Capacity

Development under the proposed project encourages infill development and discourages development on hillsides. New development or redevelopment that would be allowed by the proposed project could increase the total impervious area within Planning Area and increase stormwater runoff, which could exceed stormwater drainage facility capacity or create additional sources of polluted runoff.

However, as described previously, implementation of General Plan Update and Climate Action Plan policies and actions and adherence to the requirements of the South San Francisco Municipal Code and Zoning Ordinance would maximize the on-site infiltration capacity for new development and redevelopment projects and would minimize off-site water runoff. For example, Chapter 14.04 of the South San Francisco Municipal Code contains policies that seek to minimize impervious surfaces, minimize impacts from stormwater runoff, and follow LID requirements. Section 20.310.002 (new) of the South San Francisco Zoning Ordinance requires City Engineer approval of all drainage plans that alter the slope of contour of a site's existing drainage pattern. Section 20.310.002 (new) further requires that all drainage facilities be designed to carry waters to the nearest drainage way approved by the appropriate jurisdiction. General Plan Update Policies ES-2.2 and ES-3.3 require the City to maintain standards for new construction adjacent to the San Francisco Bay and Colma Creek, such as requiring no net new impervious areas. Policy ES-7.4 requires the City to encourage pervious surfaces in new developments.

Compliance with the General Plan Update and Climate Action Plan policies and actions, as well as adherence to the South San Francisco Municipal Code and Zoning Ordinance, would maximize infiltration and rainwater retention, which would in turn reduce stormwater runoff. Therefore, impacts related to exceedances in stormwater drainage systems or the creation of substantial additional sources of polluted runoff would be considered less than significant.

iv) Impacts to Flood Flows

As shown in Exhibit 3.9-2, the majority of the Planning Area is not located within a flood hazard zone. However, there are some areas located within the 100-year flood zone, including along Colma Creek, the navigable slough, San Bruno Creek, and the San Francisco Bay. Some areas of the Planning Area are located within the 0.2 percent annual chance flood hazard, which is referred to as the "500-year flood zone," primarily within the East of 101 and Lindenville planning sub-areas.

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area, with the majority of potential growth occurring within the East of 101, Lindenville, Downtown, and El Camino planning sub-areas (Chapter 2, Project Description, Exhibit 2-5). As such, development facilitated by the proposed project would occur within FEMA designated 100-year flood zones with a 1 percent chance of being flooded in any given year. To a smaller extent, development facilitated by the proposed project would occur within 500-year flood zones.

The General Plan Update includes policies and actions specifically designated to address flood hazards. Policy CR-2.3 requires the City to prioritize green infrastructure in the Colma Creek Watershed to reduce flooding in developed areas through continually updated site-specific design guidelines, LID, and design standards for public infrastructure projects. Policy CR-2.5 requires new development to account for SLR in all project applications, including the identification of areas of a parcel subject to flooding, the potential depth of flooding, and raising base floor elevation above the FEMA Base Flood Elevation to include SLR projections expected for the lifetime of the project. Policy CR-3.1 requires the City to continue to work with San Mateo County Flood and SLR Resiliency District on developing and implementing adaptation options for Colma Creek, restore creek ecologies, and create transitional habitat zones to build resilience against flooding. Policy ES-2.1 requires the City to protect and expand existing marsh and wetland habitat.

The South San Francisco Municipal Code also contains rules and regulations to address flood hazards. Section 15.56.140 (Development permit) requires that a development permit be obtained before any construction or other development occurs within an area of special flood hazard. Section 15.56.160 (Standards of construction) includes construction standards for all projects within special flood hazard zones, including anchoring, construction materials and methods, elevation and floodproofing. Section 15.56.170 (Standards for utilities) requires that all new and replacement water supply and sanitary sewage systems be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters. Section 15.56.170 also requires that all on-site waste disposal systems be located to avoid impairment to them, or contamination from them during flooding. Lastly, Section 15.56.220 (Coastal high hazard areas) includes standards for construction in coastal high hazard areas. For example, all new construction or other development shall be located on the landward side of the reach of mean high tide. In addition,

all new residential and nonresidential construction, including substantial improvements, shall be elevated on adequately anchored pilings or columns and securely anchored to such pilings or columns so that the bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to or above the base flood level.

The Climate Action Plan includes actions to increase stormwater infiltration and rainwater retention and assist in minimizing flood hazards. Implementation of Action CS 3.1 would enhance Colma Creek as an ecological corridor, restoring 5 miles of creek ecologies and creating transitional habitat zones to build resilience and ecosystem services, which would increase stormwater infiltration and rainwater retention, thereby assisting in minimizing flood hazards. Implementation of Action CS 2.1 would expand the canopy cover to reach the goals of the Urban Forest Master Plan, increasing stormwater infiltration and rainwater retention throughout the Planning Area, and assisting in minimizing flood hazards.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, include rules and regulations to maximize stormwater infiltration and rainwater retention, which would assist in minimizing flood hazards. Section 20.180.005 (Development Standards) (new) includes standards for the Flood Plain/SLR Overlay District. The standards for construction in these areas, including a bay access buffer, creek access buffers, using living vegetation and natural materials for levees and sea walls, employing low-impact stormwater runoff techniques, retaining 100 percent of drainage from impervious surfacing on-site, using a minimum of 80 percent native species in landscaping, requiring no net new impervious areas, and requiring the installation of fencing during construction to protect riparian areas, will assist in maximizing stormwater infiltration and rainwater retention and in minimizing flood hazards. For example, protecting riparian areas preserves natural buffers between uplands and adjacent water bodies. The riparian areas absorb flood waters and serve as natural filters of nonpoint source pollutants, including sediment, nutrients, pathogens and metals, to waterbodies. By naturally controlling and absorbing flood waters, riparian areas reduce the force, height, speed, and volume of flood waters. In addition, retaining 100 percent of drainage from impervious surfacing on a project site would ensure that stormwater runoff is retained on-site and off-site flood hazards are minimized.

Subsequent development, infrastructure, and planning projects would be subject to the General Plan Update policies and actions, as well as the South San Francisco Municipal Code and Zoning Ordinance, to reduce the risks of flooding to City residents and properties. Furthermore, as described in the Regulatory Framework section, federal and State agencies are responsible for maintaining flood protection features in the City, including the USACE and BCDC. Therefore, the potential for loss, injury, or death from impeding flood flows would be reduced to a less than significant level.

Level of Significance

Less than significant impact.

Risk of Pollutant Release Due to Inundation

Impact HYD-4: The proposed project could be located in a flood hazard zone, tsunami, or seiche zone, and could risk release of pollutants due to project inundation.

Inundation By Seiche

Seiches are changes or oscillations of water levels within a confined water body. Seiches are caused by fluctuation in the atmosphere, tidal currents, or earthquakes. The effect of this phenomenon is a standing wave that would occur when influenced by external causes. There are no large, confined water bodies within the City of South San Francisco. Therefore, development under the proposed project would not result in substantial inundation by seiche during a seismic event, and no impact would occur related to a release of pollutants due to inundation by seiche.

Inundation By Flooding (Including Sea Level Rise)

As described under Impact HYD-3, some areas of the Planning Area are located within the 100-year flood zone, including along Colma Creek, the navigable slough, San Bruno Creek, and the San Francisco Bay. Some areas of the Planning Area are located within the 0.2 percent annual chance flood hazard, which is referred to as the "500-year flood zone," primarily within the East of 101 and Lindenville planning sub-areas.

With respect to SLR, the appellate court has specifically held that an EIR need not contain an extensive analysis of SLR or evaluate the potential impacts of SLR on a project. (*Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 473-74 [*Ballona*]). Therefore, this discussion related to project site inundation from SLR is included for informational purposes. SLR is a multi-faceted and complex planning issue involving many stakeholders, including but not limited to, the BCDC, San Francisco Bay RWQCB, San Mateo County, and City of South San Francisco. BCDC's Adapting to Rising Tides Program (ART Program) works with stakeholders around the Bay Area to understand their vulnerability to SLR and how future flooding will communities, businesses, infrastructure, and natural systems.[16] The ART Bay Area report contains a regional study to assess the impacts of rising sea level on transportation networks, vulnerable communities, future growth areas, and natural lands. The report also includes potential actions to address these vulnerabilities through coordination and collaboration.[17] Thirteen geographic areas were identified in the region and recommended for a more in-depth vulnerability assessment, including the Yosemite-Visitacion area, which encompasses South San Francisco.[18]

Exhibit 3.9-3 shows the projected SLR and coastal flooding by 2100 along the coast of South San Francisco. A significant number of public facilities and infrastructure, buildings, and other structures are likely to be affected based on a vulnerability assessment conducted by San Mateo County. Portions of US-101, Fire Stations 61 and 62, the former Oyster Point Landfill, Bay Trail, South San

[16] San Francisco Bay Conservation and Development Commission (BCDC). 2022. Climate Change. Website: https://www.bcdc.ca.gov/cc/climate_change.html. Accessed April 21, 2022.

[17] San Francisco Bay Conservation and Development Commission (BCDC). 2020. Adapting to Rising Tides Bay Area. Website: http://www.adaptingtorisingtides.org/wp-content/uploads/2020/03/ARTBayArea_Main_Report_Final_March2020_ADA.pdf. Accessed April 21, 2022.

[18] San Francisco Bay Conservation and Development Commission (BCDC). 2020. Adapting to Rising Tides Bay Area: Local Assessment Yosemite-Visitacion. Website: http://www.adaptingtorisingtides.org/wp-content/uploads/2020/03/OLU_L-YosemiteVisitacion.pdf. Accessed April 21, 2022.

Francisco-San Bruno Water Quality Control Plant, and SFO are among the large public assets exposed to future SLR.[19]

In addition to the policies and actions identified under Impact HYD-3 that address flood hazards, the General Plan Update contains policies and actions to address SLR. Policy CR-2.2 requires the City to pursue a comprehensive shoreline management plan that uses a variety of adaptation solutions to protect the shoreline and enhance ecosystem resilience. Action CR-2.2.1 requires the City to continue ongoing collaboration with the USACE to protect existing and future development by raising levees or seawalls in accordance with the Continuing Authorities Program Study. Action CR-2.2.1 also requires the implementation of any future City-prepared SLR adaptation plan for the Oyster Point Marina and landfill. Action CR-2.2.2 requires the City to explore nature-based solutions appropriate for the South San Francisco shoreline, particularly at the mouth of Colma Creek, to provide protection for the built environment and ecosystems.

The South San Francisco Municipal Code and Zoning Ordinance contain rules and regulations related to flood hazards and SLR. Chapter 15.56 (Flood Damage Prevention) aims to promote the public health, safety, and general welfare, and minimize public and private losses due to flood conditions in specific areas by legally enforceable regulations applied uniformly throughout the community to all publicly and privately owned land within flood prone, mudslide [i.e., mudflow] or flood-related erosion areas. Section 15.56.140 (Development permit) requires that a development permit be obtained before any construction or other development occurs within an area of special flood hazard. Section 15.56.160 (Standards of construction) includes several construction regulations within flood hazard zones, including the use of flood resistant materials, anchoring, and flood openings. Section 15.56.220 (Coastal high hazard areas) includes standards for construction in coastal high hazard areas. Section 20.180.005 (new) of the Zoning Ordinance includes construction requirements, building heights, bay access buffers, creek access buffers, elevation of lowest floor, utilities, site grading, levees and sea walls, stormwater runoff and drainage, landscape species, impervious areas, and riparian area protection for projects located within the Flood Plain/SLR Overlay District.

As described in more detail in Section 3.8, Hazards and Hazardous Materials, mandatory federal, State, and local regulations govern the storage and use of hazardous materials to ensure appropriate containment to prevent spills. In addition, General Plan Action LU-6.6.1 requires the City to seek funding to finance cleanup and redevelopment of contaminated sites. Lastly, Action CHEJ-4.1.2 requires the City to implement any future City-prepared SLR adaptation plan for the Oyster Point Marina and landfill to prevent the release of toxins into the Bay. Therefore, impacts from inundation by flooding would be less than significant.

Inundation By Tsunami

A tsunami is a sea wave caused by a submarine earthquake, landslide, or volcanic eruption. Tsunamis can cause catastrophic damage to shallow or exposed shorelines. Portions of the City that are low-lying and located in the eastern side and adjacent to San Francisco Bay, are susceptible to inundation

[19] Sea Change San Mateo County. 2018. Sea Level Rise Vulnerability Assessment. Website: https://seachangesmc.org/ vulnerability-assessment/. Accessed April 16, 2022.

from a tsunami as shown in Exhibit 3.9 4. As such, development facilitated by the proposed project could be located within a tsunami inundation area, exposing structures, infrastructure, and people to inundation in the event of a tsunami.

As detailed above, the policies and actions of the General Plan Update and regulations in the South San Francisco Municipal Code and Zoning Ordinance that address flood hazards and SLR would also protect structures, infrastructure, and people in the event of inundation by tsunami. Moreover, the General Plan Update contains policies and actions to prepare the City to respond to natural disasters and minimize damage and injury caused by these events, including tsunamis. Action CR-1.3.1 requires the City to actively participate in the San Mateo County Hazard Mitigation Plan maintenance protocols and Countywide initiatives, adopt the Hazard Mitigation Plan by reference upon update, and update emergency operations plans and protocols to account for regularly updated hazard information. Policy CR-1.6 requires the City to continually strengthen emergency management capacity and coordination with the San Mateo County Emergency Operations Center. Action CR-1.6.1 requires the City to develop a resiliency hub program to help community members with disaster planning assistance and supplies. Lastly, Action CR-1.6.2 requires the City to add a second floor to the City's Emergency Operations Center (EOC), add a warehouse to store supplies to support the City in the event of a disaster, and ensure the EOC has the necessary capabilities and can continue operations after all future hazards.

As described in more detail in Section 3.8, Hazards and Hazardous Materials, mandatory federal, State, and local regulations govern the storage and use of hazardous materials to ensure appropriate containment to prevent spills. In addition, General Plan Action LU-6.6.1 requires the City to seek funding to finance cleanup and redevelopment of contaminated sites. Lastly, Action CHEJ-4.1.2 requires the City to implement any future City-prepared SLR adaptation plan for the Oyster Point Marina and landfill to prevent the release of toxins into the Bay. Therefore, impacts from inundation by tsunami would be less than significant.

Level of Significance

Less than significant impact.

Water Quality Control or Sustainable Groundwater Management Plans Consistency

Impact HYD-5:	**The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.**

The City is within the jurisdiction of the San Francisco Bay RWQCB. The RWQCB has established regulatory standards and objectives for water quality in San Francisco Bay in its Water Quality Control Plan for the San Francisco Bay Basin, commonly referred to as the Basin Plan.

As discussed under Impact HYD-1, construction and operation of development facilitated by the proposed project would be required to comply with CWA, the General Plan Update policies and actions, the South San Francisco Municipal Code and Zoning Ordinance, and the mandatory NPDES permit requirements. Therefore, future development under the proposed project at construction and operation would not violate any water quality standards or WDRs or otherwise substantially degrade surface or groundwater quality, in compliance with the San Francisco Bay Basin Plan. As

such, implementation of the proposed project would result in a less than significant impact relative to this topic.

As discussed under Impact HYD-2, while development under the proposed project could lead to an increased demand for water, which could lead to an increase in groundwater pumping, groundwater supply is expected to be 100 percent reliable in all year types through 2045.[20] Additionally, the General Plan Update contains several policies and actions that would facilitate groundwater recharge by encouraging pervious surfaces in new developments and requiring projects to meet federal, State, regional, and local stormwater requirements, including stormwater infiltration. Therefore, implementation of the proposed project would not conflict with or obstruct implementation of a sustainable groundwater management plan and impacts would be less than significant.

Level of Significance

Less than significant impact.

3.9.7 - Cumulative Impacts

The geographic context for an analysis of cumulative impacts is the Colma Creek Watershed, which includes Colma, Daly City, South San Francisco, and portions of unincorporated San Mateo County.[21] This analysis evaluates whether impacts of the proposed project, together with impacts of cumulative development, could result in a cumulatively significant impact to hydrology and water quality. This analysis then considers whether incremental contribution of impacts associated with implementation of the proposed project would be significant. Both conditions must apply for a project's cumulative effects to rise to the level of significance.

Cumulative development in the watershed contributes to an incremental increase in impervious surfaces that could introduce pollutants that are typically associated with urban runoff into the stormwater and/or contribute to cumulative flood conditions in the watershed. Cumulative development could also contribute to water quality impacts in the watershed from construction activities. Cumulative impacts would be less than significant because future cumulative development, infrastructure, and planning projects would be subject to local, State and federal permit requirements and would be required to comply with City (Colma, Daly City, South San Francisco) and San Mateo County ordinances and City (Colma, Daly City, South San Francisco) and San Mateo County General Plan policies, as well as other water quality regulations that control construction-related and operational discharge of pollutants in stormwater. The water quality regulations implemented by the RWQCB take a basin-wide approach and consider water quality impairment in a regional context that addresses the entire geographic context of the Colma Creek Watershed. For example, the Construction General Permit ties receiving water limitations and basin plan objectives to terms and conditions of the permit, and the MS4 Permit works with all municipalities within the Colma Creek Watershed (Colma, Daly City, South San Francisco, and unincorporated San Mateo County) to manage stormwater systems to be collectively protective of

[20] California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. South San Francisco District. Website: https://www.calwater.com/docs/uwmp2020/SSF_2020_UWMP_FINAL.pdf. Accessed April 20, 2022.

[21] County of San Mateo. 2022. Colma Creek Watershed. Website: https://www.smcgov.org/publicworks/colma-creek-watershed. April 24, 2022.

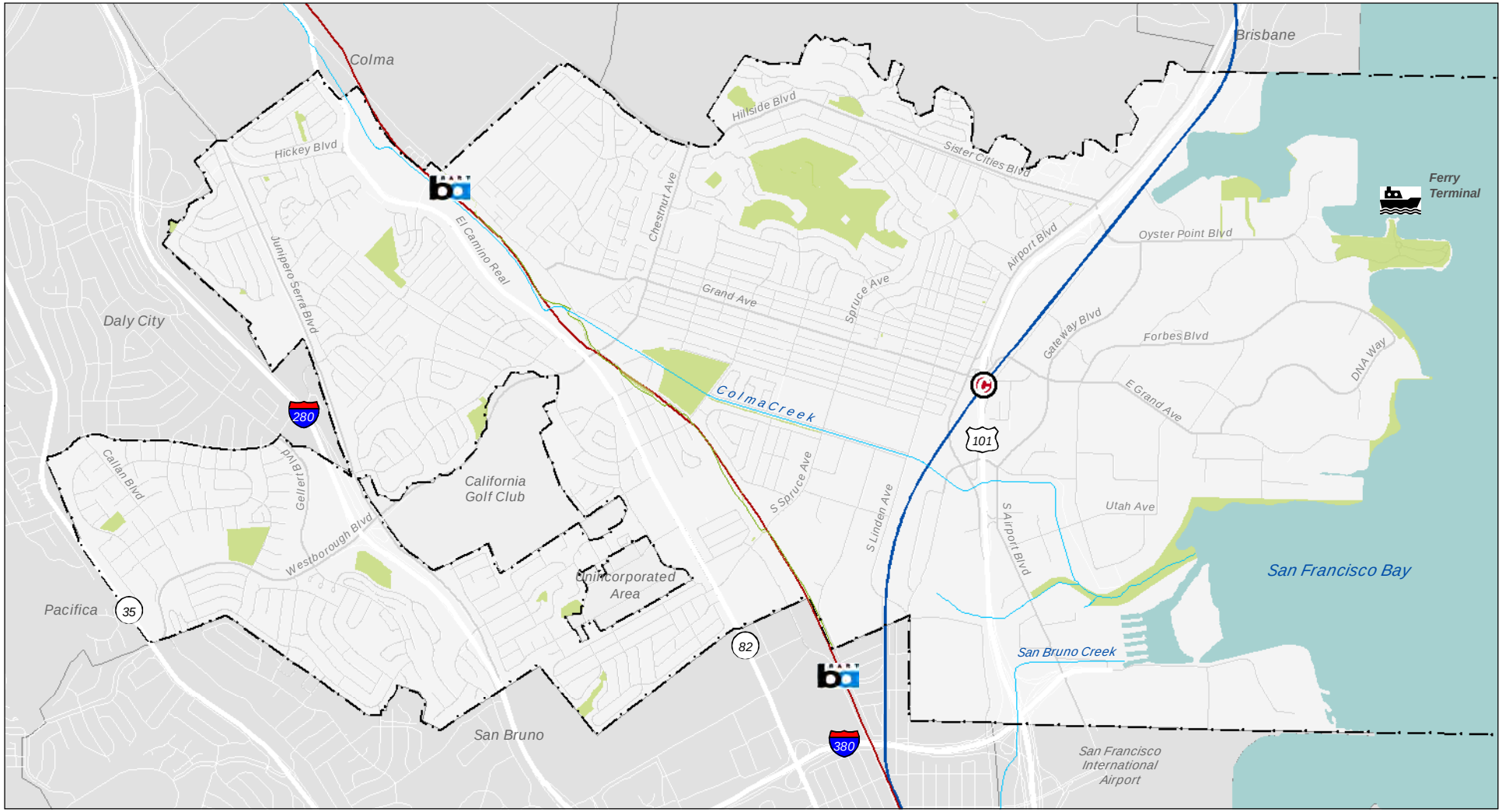
water quality. If a CWA Section 404 permit is required, the USACE would have approval authority. For these reasons, cumulative impacts to hydrology and water quality would be less than significant.

Moreover, the proposed project's incremental contribution to less than significant cumulative impacts would not be significant. As discussed above, development resulting from implementation of the proposed project would be subject to General Plan Update policies and actions and the South San Francisco Municipal Code and Zoning Ordinance to reduce hydrology and water quality impacts. As previously discussed, future development under the proposed project would be required to conform to federal, State, and local policies that would reduce hydrology and water quality impacts to less than significant levels. When applicable, any additional new development within the Planning Area would be subject, on a project-by-project basis, to independent CEQA review as well as policies and actions in the General Plan Update, the South San Francisco Municipal Code and Zoning Ordinance, and other applicable City requirements that reduce impacts related to hydrology and water quality. More specifically, potential changes related to stormwater quality, stormwater flows, drainage, impervious surfaces, and flooding would be minimized by the implementation of stormwater control measures, bioswales, infiltration, and LID measures, and review by the City Engineer to integrate measures to reduce potential flooding impacts. Therefore, development under the proposed project would not have a cumulatively considerable contribution to a cumulative hydrology impact.

For these reasons, the proposed project's contribution to cumulative hydrology and water quality impacts would be less than significant.

Level of Cumulative Significance

Less than significant impact.



Source: Raimi + Associates, July 2019.

Jurisdictional Boundary

- City of South San Francisco
- Other City Boundaries
- Sphere of Influence

Transportation Features

- BART
- Caltrain
- Highway
- Arterial
- Local Street

Legend

- Streams
- Waterbody

FIRSTCARBON SOLUTIONS™

3,000 1,500 0 3,000 Feet

Exhibit 3.9-1
South San Francisco Hydrologic Features

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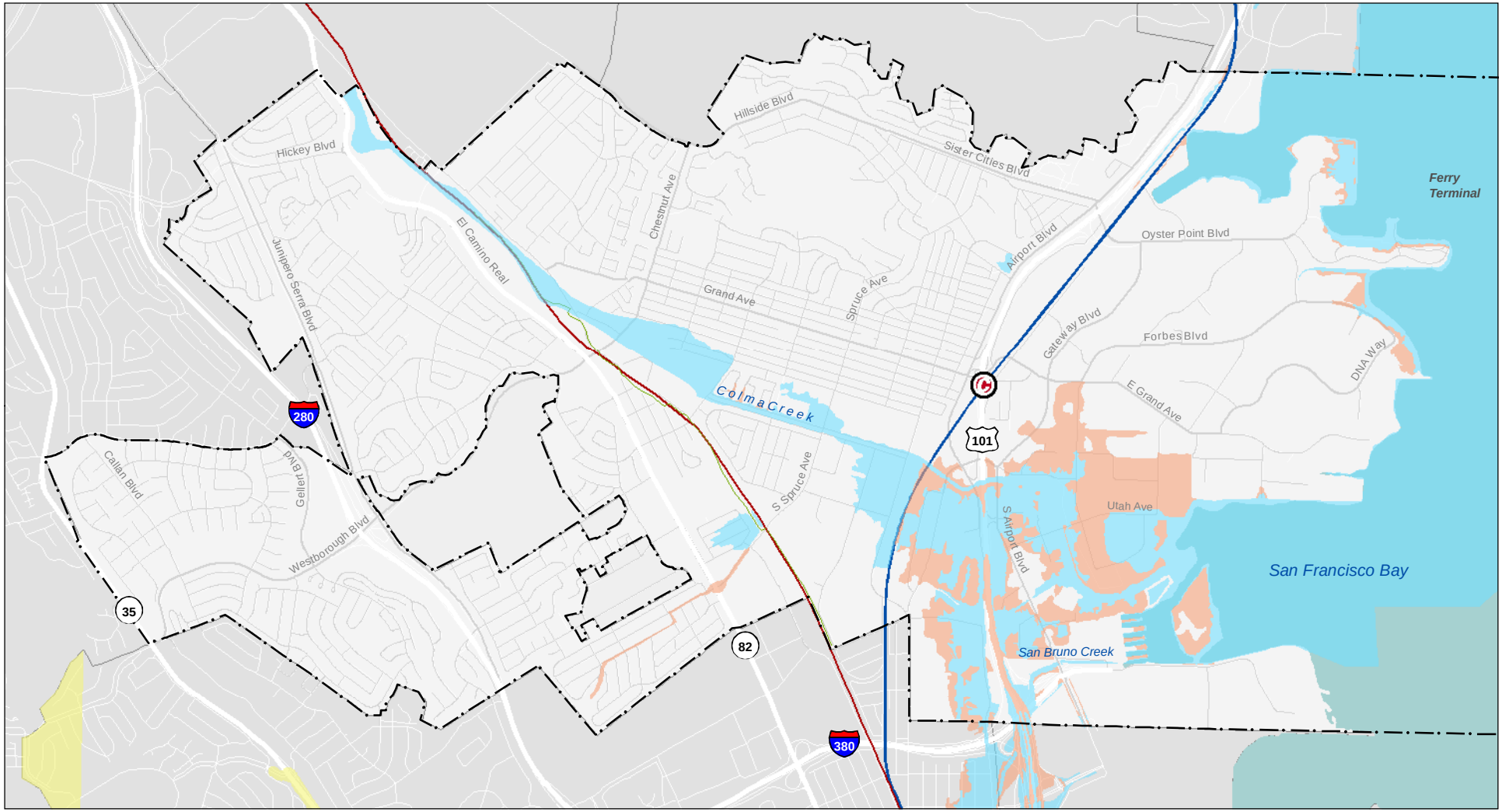

Source: Raimi + Associates, July 2019. FEMA National Flood Hazard Layer (NFHL) May 2021.

Jurisdictional Boundary

- City of South San Francisco
- Other City Boundaries
- Sphere of Influence

Transportation Features

- BART
- Caltrain
- Highway
- Arterial
- Local Street

Flood Hazard Zones

Zone Type

- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Area of Undetermined Flood Hazard

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3,000 1,500 0 3,000 Feet

Exhibit 3.9-2
South San Francisco Flood Hazard Zones

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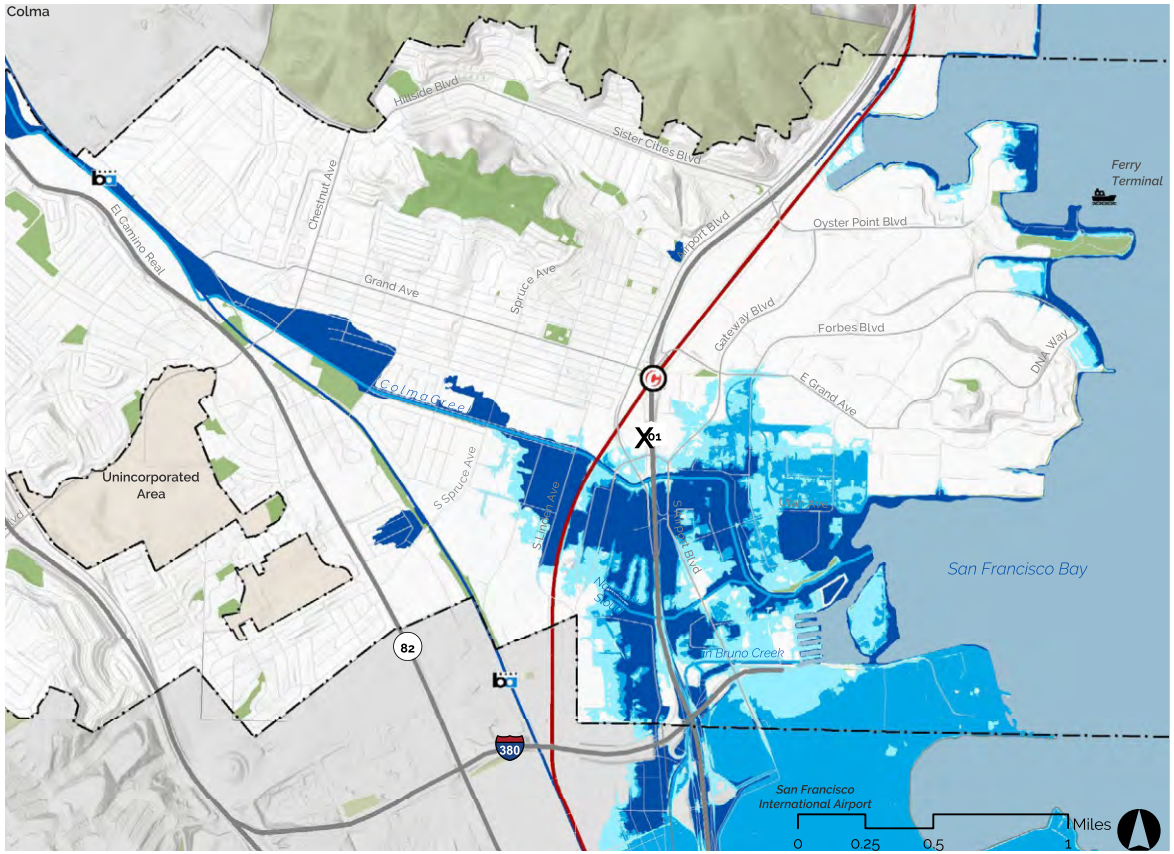

100-year Flood Zones

52 Inches (100-year flood + 2040 sea level rise)

77 Inches (100-year flood + 3ft sea level rise

City of South San Francisco

Unincorporated Area in City Sphere

Caltrain Station

Caltrain

BART Station

BART

Highway

Arterial Road

Local Road

City Parks, Open Space, & Joint Facilities

Waterbody

Streams

Source: SHAPE South San Francisco.

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Exhibit 3.9-3
Sea Level Rise Risk (2100 Mid-level Scenario)

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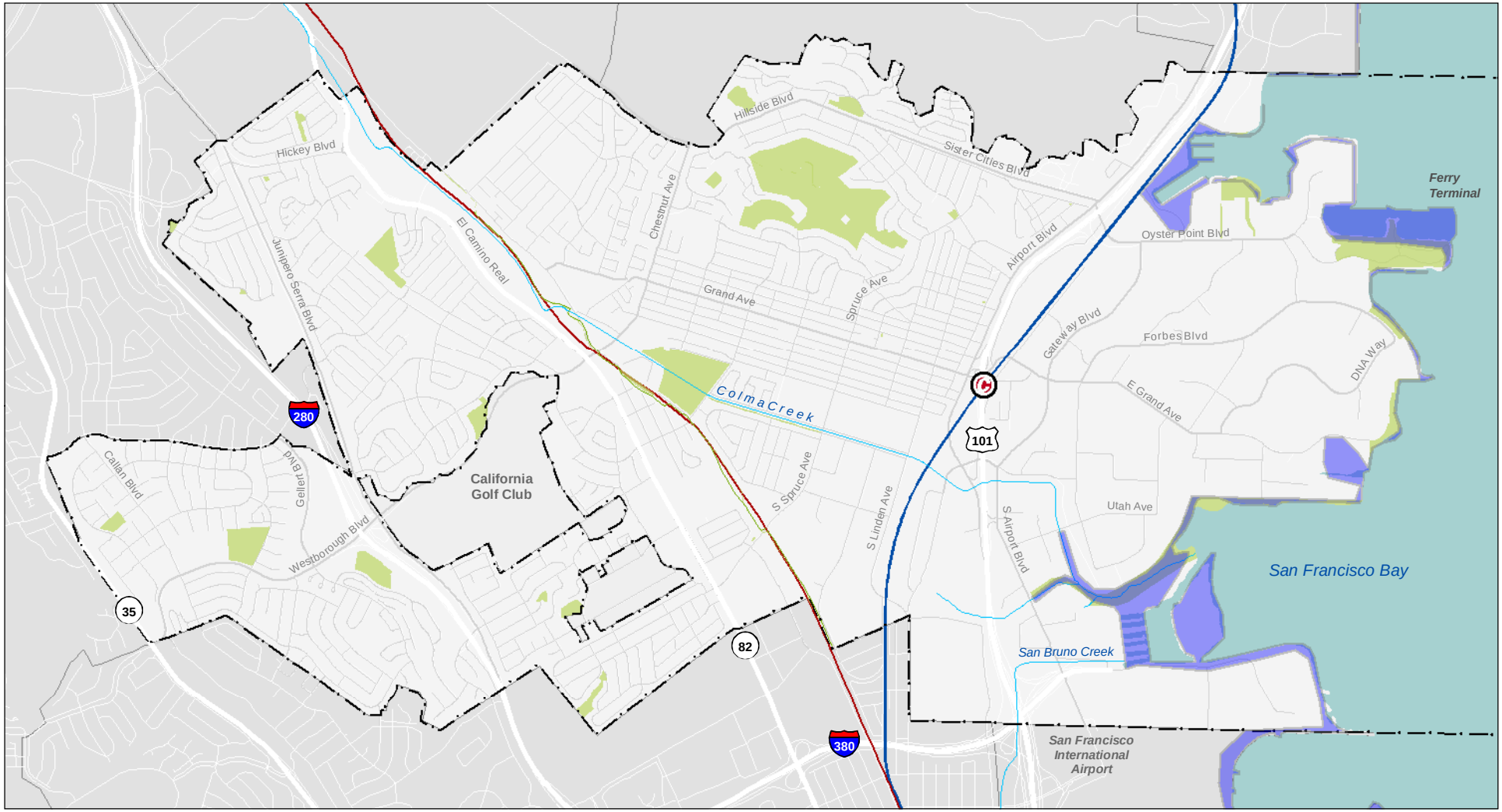

Source: Raimi + Associates, July 2019. ESRI, U.S. Geological Survey (USGS), California Geological Survey (CSG) data.

Jurisdictional Boundary

- City of South San Francisco
- Other City Boundaries
- Sphere of Influence

Transportation Features

- BART
- Caltrain
- Highway
- Arterial
- Local Street

Tsunami Susceptibility

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3,000 1,500 0 3,000 Feet

Exhibit 3.9-4
Tsunami Hazards

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3.10 - Land Use and Planning

3.10.1 - Introduction

This section of the Draft Program Environmental Impact Report (Draft Program EIR) describes the existing character of the South San Francisco General Plan Update Planning Area (Planning Area) related to land use. This section addresses the consistency of the General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project) with any land use plan, policy, or regulation, which has been adopted for the purpose of avoiding or mitigating an environmental effect. Future discretionary projects facilitated by the proposed project will be evaluated for project-specific impacts related to land use and planning at the time they are proposed.

The following comments related to Land Use and Planning were received in response to the Notice of Preparation (NOP). The comment letters are included in Appendix A.

- Expresses concern that portions of the proposed mixed-use residential areas east of US-101 are within the airport's runway safety zone boundaries and 65 decibel Community Noise Equivalent Level (CNEL) noise contour.
- Requests that the Draft Program EIR evaluate project consistency with all comprehensive Airport Land Use Compatibility Plan (ALUCP) for the environs of San Francisco International Airport (SFO) regulatory requirements and policies.
- Expresses concern that any residential developments east of US-101 could reduce the efficacy of the Nighttime Preferential Runway Use program that protects residents of South San Francisco, Daly City, and Pacifica by maximizing flights over water and industrial areas between 1:00 a.m. and 6:00 a.m.
- Recommends that noise impacts on sensitive receptors and any necessary mitigation measures should be fully evaluated in the Draft Program EIR, and the Draft Program EIR should describe the project's consistency with noise policies described in ALUCP, including Noise Policies NP-1 through NP-4.
- States that the southern portions of the General Plan Update area are within various runway end safety zones, including the Inner Approach/Departure Zone, Inner Turning Zone, and Outer Approach/Departure Zone and requests that the Draft Program EIR describe and evaluate the proposed project's consistency with land use criteria within these runway end safety zones, as described in ALUCP SP-1 through SP-3.
- Requests that the Draft Program EIR evaluate impacts of the new vehicular bridge between Oyster Point and North Access Road on airport property.
- Recommends the Draft Program EIR discuss how the proposed policies in the General Plan Update would ensure Airport/Land Use Compatibility with noise, height/airspace protection, safety and overflight compatibility criteria and policies in the 2012 SFO ALUCP.
- Recommends that the City submit the General Plan Update to the Airport Land Use Commission (ALUC) for review and approval.

- Supports inclusion of unincorporated islands within the sphere of influence of South San Francisco within the General Plan study area.
- Recommends that the City explore how to allow for annexations of the unincorporated areas, through individual annexations, a phased approach, or annexation of the whole area.
- Recommends that the Draft Program EIR identify the San Francisco Public Utilities Commission (SFPUC) as an agency that may provide approval for future projects or activities under the General Plan Update and include information about the SFPUC's project review process.
- Recommends that the Draft Program EIR analyze the General Plan Update's consistency with applicable SFPUC adopted plans, policies, and guidelines in the land use analysis.
- Requests the Draft Program EIR to disclose and analyze potential land use conflicts from proposed housing sites, accessory housing land uses, or residential zoning included in the updated Housing Element that might conflict with established plans and policies of other agencies, including the SFPUC.
- Cites SFPUC's policies regarding right-of-way.

The descriptions and analysis in this section are based, in part, on statements, data, and figures provided by the following reference materials:

- San Mateo County General Plan.
- South San Francisco General Plan Update.
- South San Francisco Municipal Code.
- Comprehensive ALUCP for the Environs of SFO.
- SFPUC Interim Water Pipeline Right-of-Way Use Policy.
- SFPUC Integrated Vegetation Management Policy.

3.10.2 - Environmental Setting

Land Use

Overview

The City of South San Francisco (City) is in northern San Mateo County within the San Francisco Peninsula of California (Exhibit 2-1). The San Francisco Peninsula, and particularly the northern portion in which South San Francisco is located, is primarily urbanized. South San Francisco is bound by the City of Brisbane and San Bruno Mountain to the north, San Francisco Bay to the east, the City of San Bruno to the south, and Daly City, the City of Pacifica, the Town of Colma, and the Pacific Coast Ranges to the west (Exhibit 2-2). SFO is located immediately to the south but falls within the City and County of San Francisco's jurisdictional boundaries. The City encompasses approximately 31 square miles and has a population of 67,135 people. It was incorporated in 1908 and is nearly built out.

The Planning Area consists of all properties located within the incorporated boundary of the City, as well as lands within the City's Sphere of Influence (SOI). The Planning Area consists of approximately 4,456 acres. Approximately 4,226 acres are located within the city limits, with an additional 230

acres located within the SOI. The SOI, established by the San Mateo County Local Agency Formation Committee (LAFCo), contains land that may ultimately be annexed into the City. The Planning Area boundaries are depicted in Chapter 2, Project Description, Exhibit 2-2.

The Planning Area is characterized by rolling terrain that varies from steep hillsides to flat bay lands. U.S. Highway 101 (US-101) and Interstate 280 (I-280) traverse South City in north–south directions. The Caltrain tracks parallel US-101, while the Bay Area Rapid Transit (BART) tracks parallel El Camino Real in the city limits. Notable landmarks include Signal Hill and "The Industrial City" hillside sign, Oyster Point, and Colma Creek.

Land Use Inventory

Table 3.10-1 summarizes the existing land use within the Planning Area. Exhibit 2-3 depicts the existing land use map. As indicated in the table, residential is the single largest land use category followed by industrial/research and development. Approximately 153 acres within the Planning Area are vacant. More detailed existing land use summary can be found in Chapter 2, Project Description, Table 2-1.

Table 3.10-1: Existing Land Use Summary

Category	Acres	Percent
Residential	1,773.5	39.8%
Commercial	250.5	5.6%
Industrial/Research and Development	1,313.7	29.5%
Parks, Open Space, and Common Greens	442.4	9.9%
Public and Institutional	292.9	6.6%
Vacant	153.1	3.4%
Total	**4,456.1**	**100.0%**

Notes:
Refer to Chapter 2, Project Description, Table 2-1.
Source: City of South San Francisco 2022.

San Francisco International Airport

SFO is the busiest air carrier airport in the San Francisco Bay Area and Northern California. In Fiscal Year 2019 (July 1, 2018 to June 30, 2019), passenger traffic at SFO totaled 57.6 million.[1] In Fiscal Year 2021 (July 1, 2020 through June 30, 2021), passenger traffic at SFO totaled 13.7 million.[2] This drop in passenger traffic was a result of the pandemic. SFO is the 15th busiest airport in North America and the 50th busiest in the world.[3] SFO also hosts air cargo operations, with nearly 500,000 metric tons of

[1] San Francisco International Airport (SFO). 2021. Financial Summary. Website: https://www.flysfo.com/fy-2018-2019-financial-summary. Accessed May 3, 2022.
[2] San Francisco International Airport (SFO). 2022. Facts and Figures. Website: https://www.flysfo.com/fy-2020-2021-facts-figures. Accessed May 3, 2020.
[3] Ibid.

cargo handled in Fiscal Year 2019. SFO occupies 5,171 acres, with 2,383 developed for airport use.[4] Although located in San Mateo County, SFO is owned and operated by the City and County of San Francisco.

SFO has eight runways: 1L and 1R; 19L and 19R; 10L and 10R; and 28L and 28R. Most take-offs occur on Runways 1L and 1R and 28L and 28R, while most landings occur on Runways 28L and 28R. The Comprehensive ALUCP for the Environs of SFO (Exhibits II-7 and II-8) indicate that some arrival flight tracks and departure flight tracks pass over South San Francisco.

Almost the entire Planning Area is within the SFO Influence Area B—Land Use Policy Action/Project Referral Area boundary. All of South San Francisco, and much of the peninsula, is within the SFO Influence Area A—Real Estate Disclosure Area boundary.[5] ALUCP Exhibit IV-5 indicates that 65 and 70 CNEL aviation noise contours extend into the southern portion of the city limits.[6] (See also Section 3.11, Noise, Exhibit 3.11-2). Small areas of the southeastern portion of the City are located within Safety Compatibility Zones 2, 3, and 4 (Section 3.8, Hazards and Hazardous Materials, Exhibit 3.8-1).

San Francisco Public Utilities Commission Right-of-Way

The SFPUC operates and manages land and water system infrastructure that is part of the Hetch Hetchy Regional Water System. The SFPUC has several water transmissions pipelines that traverse the City, generally in a north–south direction within right-of-way lands that are typically 80 feet wide (Exhibit 3.10-1). In some cases, the right-of-way is owned in fee by the City and County of San Francisco and operated and managed by the SFPUC (SFPUC Fee). In other cases, the City and County of San Francisco and SFPUC have acquired a right-of-way easement, or the pipelines are within a public right-of-way. These pipelines include the SFPUC's San Andreas Pipeline Numbers 1, 2, and 3; the Sunset Supply Line; the Baden-Merced Pipeline; and the Crystal Springs Pipelines Numbers 1 and 2. In addition, the SFPUC Fee includes undeveloped right-of-way land, valve lots, and groundwater facilities (including five well sites).[7]

Regional Transportation Network

Regional access to the City is via highways and major roadways, including I-280, US-101, El Camino Real (State Route 82), and Skyline Highway (State Route 35). US-101 is an eight-lane freeway that extends north to south on the eastern side of South San Francisco. US-101 is a heavily traveled freeway connecting San Francisco and the Bay Bridge with San Mateo and Santa Clara Counties. I-280 is an eight-lane freeway that extends north to south on the western side of South San Francisco. The freeway connects San Francisco with San Mateo and Santa Clara Counties. I-380 is a short east–west freeway spur that connects US-101 and I-280 via San Bruno and South San Francisco. State Route (SR) 82, otherwise known as El Camino Real, is a major arterial that extends north to south in South San Francisco connecting San Francisco to San José. SR-82 is generally four to

[4] City/County Association of Governments of San Mateo County (C/CAG). 2012. Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. Website: https://ccag.ca.gov/programs/airport-land-use/. Accessed May 10, 2022.

[5] City/County Association of Governments of San Mateo County (C/CAG). 2012. Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. Website: https://ccag.ca.gov/programs/airport-land-use/. Accessed May 10, 2022.

[6] Ibid.

[7] Wilson, J. 2021. SFPUC NOP Comment Letter for the Proposed South San Francisco General Plan Update EIR. March 18.

six lanes with a speed limit of 35 miles per hour (mph). El Camino Real is an important transit corridor in San Mateo and Santa Clara counties. SR-35 is a four-lane roadway that extends north to south along the western border of South San Francisco. It connects South San Francisco and San Bruno with Daly City, Pacifica, and western San Francisco.

In addition, BART, Caltrain, SamTrans, and the San Francisco Bay Ferry provide public transit service to and from the City. The South San Francisco BART station is located at 1333 Mission Road and the San Bruno BART station is located south of the City at 1151 Huntington Avenue. The South San Francisco Caltrain Station is currently located along Dubuque Avenue underneath the East Grand Avenue overpass on the east side of US-101.

3.10.3 - Regulatory Framework

Federal

Code of Federal Regulations Part 77

Title 14 of the Code of Federal Regulations Part 77, Safe, Efficient Use and Preservation of the Navigable Airspace, governs the Federal Aviation Administration (FAA) review of proposed construction exceeding certain height limits, defines airspace obstruction criteria, and provides for FAA aeronautical studies of proposed construction. The regulations contain three key elements: (1) standards for determining obstructions in the navigable airspace and designation of imaginary surfaces for airspace protection; (2) requirements for project sponsors to provide notice to the FAA of certain proposed construction or alteration of structures that may affect the navigable airspace; and (3) the initiation of aeronautical studies, by the FAA, to determine the potential effect(s), if any, of proposed construction or alterations of structures on the subject airspace. Pursuant to these federal regulations, any new structure or alterations to an existing structure (including portions of structures, mechanical equipment, flag poles, and other projections) with a height that would exceed Part 77 elevation thresholds is required to file a Notice of Proposed Construction or Alteration with the FAA. Part 77 Subpart C establishes obstruction standards for the airspace around airports including approach zones, conical zones, transitional zones, and horizontal zones known as “imaginary surfaces.” These imaginary surfaces rise from the primary surface (ground level at the SFO runways), and gradually rise along the approach slopes and sides of the runways. The FAA considers any objects that penetrate these imaginary surfaces as potential obstructions to air navigation. Obstructions may occur without compromising safe air navigation, but they must be marked, lighted, and noted on aeronautical publications to ensure that pilots can see and avoid them.

State

California Planning and Zoning Law

California Government Code Section 65300 *et seq*., the local planning statute, requires all counties and cities in the State to prepare and maintain a General Plan for long-term growth, development, and management of the land within the jurisdiction’s planning boundaries. The General Plan acts as a “constitution” for development and is the City’s lead legal document in relation to growth, development, and resource management issues. Development regulations (e.g., zoning and subdivision standards and public improvement plans and projects, such as a Capital Improvement

Program [CIP]) are required by law to be consistent with the General Plan (see e.g., Government Code sections 65401, 65402, 65454, and 66473.5).

General Plans must address a broad range of topics, including, at a minimum, the following mandatory elements: land use, circulation, housing, conservation, open space, noise, and safety (Gov. Code section 65302). At the discretion of each jurisdiction, the General Plan may combine these elements and may add optional elements relevant to the physical features of the jurisdiction. A General Plan must be comprehensive, internally consistent, and plan for the long term. Accordingly, the General Plan should be clearly written, easy to administer, and readily available to the public.

Section 65301 of the General Plan Law requires that a general plan include the boundary of the local jurisdiction as well as areas outside its boundary that bear relation to the planning of the jurisdiction. The planning area for a city should include (at minimum) all land within the city limits and all land within the City's SOI. As indicated in Chapter 2, Project Description, the Planning Area consists of all properties located within the incorporated boundary of the City, as well as lands within the City's SOI.

State Aeronautics Act

The State Aeronautics Act requires that each local agency whose general plan includes areas covered by an ALUCP must submit a copy of its General Plan to the Airport Land Use Commission (ALUC). According to the Comprehensive ALUCP for the Environs of SFO, almost the entire Planning Area is within SFO Influence Area B—Land Use Policy Action/Project Referral Area boundary. Within SFO Influence Area B, the ALUC shall exercise its statutory duties to review proposed land use policy actions, including new general plans, specific plans, zoning ordinances, plan amendments and rezoning, and land development proposals. All of South San Francisco, and much of the peninsula, is within the SFO Influence Area A—Real Estate Disclosure Area boundary.[8] ALUCP Exhibit IV-5 indicates that 65 and 70 CNEL aviation noise contours extend into the southern portion of the city limits.[9] Small areas of the southeastern portion of the City are located within Safety Compatibility Zones 2, 3, and 4 (Section 3.8, Hazards and Hazardous Materials, Exhibit 3.8-1).

Regional

Plan Bay Area 2050

Plan Bay Area 2050 is a long-range plan charting the course for the future of the nine-county San Francisco Bay Area, including San Mateo County in which South San Francisco is located. Plan Bay Area 2050 focuses on four key elements—housing, the economy, transportation, and the environment—and identifies a path to make the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges. Plan Bay Area 2050 supersedes Play Bay Area 2040. This new regional plan outlines strategies for growth and investment through the year 2050, while simultaneously striving to meet and exceed federal and State requirements. The Metropolitan

[8] City/County Association of Governments of San Mateo County (C/CAG). 2012. Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. Website: https://ccag.ca.gov/programs/airport-land-use/. Accessed May 10, 2022.

[9] Ibid.

Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) adopted Plan Bay Area 2050 at a special joint meeting of MTC and the ABAG Executive Board on October 21, 2021.

Plan Bay Area 2050 provides policies and investments necessary to advance the goal of a more affordable, connected, diverse, healthy, and vibrant Bay Area. However, it does not fund specific infrastructure projects nor change local policies. Cities and counties retain all local land use authority. Plan Bay Area 2050 identifies a potential path forward for the types of public policies necessary to realize a future growth pattern for housing and jobs.

Priority Development Areas

Priority Development Areas (PDAs) are geographic areas within existing communities that the MTC, in partnership with ABAG, have identified for future growth. PDAs are typically near high-quality transit service, and located near employment centers, shopping, and neighborhood services. The City has two PDAs: the Downtown PDA and the El Camino Real PDA. The City has adopted plans for each of these areas, the El Camino Real/Chestnut Avenue Area Plan (2011) and the Downtown Station Area Specific Plan (2015).

San Mateo Local Agency Formation Commission

San Mateo LAFCo is a State-mandated local agency established to oversee the boundaries of cities and special districts and charged with the responsibilities of encouraging orderly development, discouraging urban sprawl, and preserving agricultural and open space lands. San Mateo LAFCo is governed by a seven-member commission elected to 4 year terms. The commission consists of two members of the County Board of Supervisors, two members of city councils, two members of independent special districts, and one public member. There are also four alternate members.

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 establishes procedures for local government changes of organization, including city incorporations, annexations to a city or special district, and city and special district consolidations. Local Agency Formation Commissions (LAFCos) have numerous powers under the Act, but those of primary concern are the power to act on local agency boundary changes and to adopt spheres of influence for local agencies. Among the purposes of an LAFCo are the discouragement of urban sprawl and the encouragement of the orderly formation and development of local agencies.

San Mateo County General Plan

San Mateo County General Plan was approved by the Board of Supervisors on November 18, 1986. The County General Plan Policies were updated in January 2013. The County General Plan provides key plans, regulations, and agencies that affect planning decisions within unincorporated areas. The County General Plan indicates the type of development that the County desires, where it should be located, and how it should be regulated. The County's General Plan includes the following 16 elements, or chapters:

- Vegetative, Water, Fish, and Wildlife Resources
- Soil Resources
- Mineral Resources
- Visual Quality

- Historical and Archaeological Resources
- Park and Recreation Resources
- General Land Use
- Urban Land Use
- Rural Land Use
- Water Supply
- Wastewater
- Transportation
- Solid Waste
- Housing
- Natural Hazards
- Man-made Hazards

The County's General Plan establishes allowed land uses for lands within the City's SOI. While the City of South San Francisco General Plan Land Use Map identifies planned land uses within the SOI, the County of San Mateo has ultimate land use planning and project approval authority within the SOI unless the lands are annexed to the City.

The City's SOI includes two unincorporated San Mateo County "islands." Chapter 2, Project Description, Figure 2-2, identifies the location of the two unincorporated islands. One island is bound by I-280 on the west, Westborough Boulevard to the north, Orange Avenue roughly to the east, and Ponderosa Road to the south; most of this area is owned by the City and County of San Francisco and is the site of the California Golf Club of San Francisco. Ponderosa Elementary School is also situated in this unincorporated island on land owned by the South San Francisco Unified School District (SSFUSD). The other island is roughly bound by Conmur Street to the west, Country Club Drive to the north, Alida Way to the east, and Northwood Drive to the south, and consists primarily of single-family residential uses and religious facilities on larger lots.

SFO Land Use Compatibility Plan

The Comprehensive ALUCP for the Environs of SFO was adopted by the City/County Association of Governments of San Mateo County (C/CAG) on November 8, 2012. The ALUCP establishes land use compatibility criteria for new development and land use activities that occur within the SFO Influence Area. Criteria is based on aviation noise contours and airport safety zones.

Almost the entire Planning Area is within the SFO Influence Area B–Land Use Policy Action/Project Referral Area boundary. All of South San Francisco, and much of the peninsula, is within the SFO Influence Area A–Real Estate Disclosure Area boundary. ALUCP Exhibit IV-5 indicates that 65 and 70 CNEL aviation noise contours extend into the southern portion of the city limits. (See also Section 3.11, Noise, Exhibit 3.11-2). Small areas of the southeastern portion of the City are located within Safety Compatibility Zones 2, 3, and 4 (Section 3.8, Hazards and Hazardous Materials, Exhibit 3.8-1).

San Francisco Public Utilities Commission Interim Water Pipeline Right-of-Way Use Policy

The SFPUC Interim Water Pipeline Right-of-Way Use Policy is used to help inform how and in which instances the right-of-way can serve the needs of third parties—including public agencies, private

parties, nonprofit organizations, and developers—seeking to provide recreational and other use opportunities to local communities. Through a formal process, the SFPUC may permit a secondary use on the right-of-way if it benefits the SFPUC, is consistent with the SFPUC mission and policies, and does not interfere with, endanger, or damage the SFPUC's current or future operations, security or facilities. No secondary use of SFPUC land is permitted without the SFPUC's consent.

The SFPUC also maintains a Right-of-Way Encroachment Removal Policy and a Right-of-Way Vegetation Management Plan administered under the Right-of-Way Integrated Vegetation Management Policy. These policies address increased urbanization and development around SFPUC ROWs and encroachment thereto.

Local

South San Francisco General Plan Update

The General Plan Update proposes the following policies and actions that assist in reducing or avoiding impacts related to land use and planning:

Policy LU-1.1 Support mixed use activity centers. Support a network of vibrant mixed use activity centers located throughout the city. Mixed use centers should include business and services, housing, healthy food, parks, and other gathering places.

Policy LU-1.2 Connectivity in complete neighborhoods. Improve walk, bike, and accessibility in complete neighborhoods.

Policy LU-1.4 Maintain and expand public facilities and services. Maintain and expand public facilities to better support the community, including schools, libraries, utilities, and recreational spaces, particularly in neighborhoods lacking these resources. Seek opportunities to co-locate new public projects near compatible civic uses such as schools and campuses to create nodes of activity and services.

Policy LU-1.7 Create new Lindenville and East of 101 mixed use neighborhoods. Facilitate the construction of new mixed-use neighborhoods in Lindenville and East of 101 that are well connected to services, transit, amenities, public buildings, and parks and recreational facilities.

Policy LU-2.1 Prioritize development near transit centers. Collaborate with developers and property owners to locate new housing, mixed use, and employment uses near transit centers to minimize reliance on personal automobiles.

Action LU-2.1.3 Update existing Specific Plans. Following adoption of the General Plan, review the existing Oyster Point Specific Plan (2011) and others and make changes to ensure consistency.

Policy LU-2.3 Develop connected transit-oriented communities. Develop strong pedestrian, shuttle, and bicycle connections to and/from transit via pedestrian-oriented

building design, creating safe and convenient road crossings, and providing street furniture and amenities.

Policy LU-6.1 Preserve industrial uses in areas designated Mixed Industrial High. Prohibit the introduction of new residential, commercial, and other nonresidential uses in areas designated as Mixed Industrial High to preserve land for industrial uses.

Policy LU-6.2 Prohibit incompatible use encroachment. Prohibit additional encroachment of incompatible uses into industrial areas in Lindenville and East of 101, except where residential growth is planned.

Policy LU-6.3 Encourage redevelopment of older or marginal industrial areas. Encourage the redevelopment of existing older or marginal industrial areas with new, Mixed Industrial High areas. Facilitate creative and innovative building and space design to support emerging industrial uses.

Policy LU-6.5 Preserve production, distribution, service, and repair (PDR) businesses. Preserve production, distribution, and repair (PDR) businesses in South San Francisco.

Policy LU-6.6 Encourage non-polluting industries. Encourage development of non-polluting industries that are not major sources of air, water, or noise pollution.

Action LU-6.6.1 Cleanup of Hazardous sites. Seek funding to finance cleanup and redevelopment of contaminated sites.

Policy LU-6.7 Provide efficient permitting of industrial uses. Continue to provide efficient permitting and transparent development processes to ensure City government is friendly to industrial development.

Policy LU-6.8 Maintain industrial circulation in Lindenville and East of 101. As residential and mixed uses are added to Lindenville and East of 101, maintain vehicular infrastructure and improve circulation to accommodate vehicular transportation needs for industrial land uses, including logistics and warehousing land uses, and minimizing conflicts with new uses.

Policy LU-7.1 Promote complete neighborhoods. Promote new commercial uses and revitalize existing commercial areas in locations that provide convenient access to a range of goods and services.

Policy: LU-7.2 Concentrate neighborhood serving commercial. Allow existing strip commercial corridors like El Camino Real to intensify with stand-alone residential uses and concentrate neighborhood serving commercial uses into mixed use activity centers.

Policy LU-7.3 Determine incentives to create community facilities. Determine development incentives to encourage the creation of additional community facilities, including

early childhood education, community space, artist space, and workforce training centers. Potential incentives could include not counting such uses toward floor area ratio maximums, providing density bonuses, and similar provisions.

Policy LU-7.4 Intensify low-density strip commercial and shopping centers. Intensify low-density strip commercial and shopping centers into mixed use activity centers that are accessible to transit options.

Policy LU-7.5 Foster pedestrian and bicycle access in neighborhood commercial development. Require new commercial development to foster pedestrian and bicycle access by minimizing building setbacks from the sidewalk, providing safe, accessible pedestrian connections, and creating secure and convenient bike storage.

Policy LU-8.3 Improve pedestrian connections and sidewalks. Improve pedestrian connections and sidewalk infrastructure across the city, especially between residential and commercial areas, keeping in mind mobility needs of children, families, seniors, and people with disabilities.

Action LU-9.4.1 Develop utility equipment design standards. Develop and adopt new standards to minimize the detrimental appearance of accessory utility equipment (transformers, cable cabinets, utility meters, utility lines, etc.) by integrating them into less prominent areas of the site or by screening them with landscaping, artistic features, or architectural materials compatible with the primary structures. Ensure that such facilities are sited so as not to impede pedestrian access.

Subareas Element

Policy SA-6.1 Develop new buildings to be compatible with Downtown building scale and character. Ensure new buildings are developed at a scale and in a character compatible with Downtown's existing historical and physical context.

Policy SA-7.3 Require context-sensitive design. Require context-sensitive design for new buildings along Airport Boulevard, including height transitions, rear setbacks, and use of visual buffers (e.g., landscaping, fencing) to provide appropriate transitions between new buildings and existing residential uses.

Action SA-12.6.1 Review consistency with San Francisco International Airport Land Use Compatibility Plan. Review the San Francisco International Airport Land Use Compatibility Plan (ALUCP) and as needed, update the City of South San Francisco's General Plan to be in conformance with land use compatibility standards in the ALUCP. In the event that updates to the ALUCP allow residential land uses on suitable sites on the El Camino Real corridor where residential is not currently permitted, update the General Plan to allow Urban Residential uses.

Policy SA-13.4 Require context-sensitive design. Require development projects along El Camino Real to use architectural transitions, such as setbacks, transitions in building height, and landscaping, to adjacent residential properties.

Policy SA-21.3 Allow building heights in the East of 101 area to the maximum limits permitted under Federal Aviation regulations. Allow building heights in the East of 101 area to the maximum limits permitted under Federal Aviation regulations.

Policy SA-29.2 Allow annexation on a case-by-case basis. Allow annexation on a case-by-case basis for lots that are contiguous to South San Francisco City limits in the event owners request annexation into the City of South San Francisco.

Policy SA-30.1 Require context-sensitive design. Require context-sensitive design for new buildings along El Camino Real and South Spruce Avenue, including height transitions, rear setbacks, and use of visual buffers (e.g., landscaping, fencing) to provide appropriate transitions between new buildings and existing residential uses.

Policy SA-32.5 Create buffering from US-101. Create landscaping buffers and other buffers to reduce noise, visual, and air quality impacts from US-101.

Mobility Element

Policy MOB-2-1 Incorporate complete streets improvements into all roadway and development projects.

Action MOB-2.1.1 Complete multimodal design and impact analysis. Ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled.

Action MOB-2.1.3 Implement Active South City Pedestrian and Bicycle Plan. All capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans.

Action MOB-2.2.1 Implement Safe Routes to Schools program. Collaborate with the South San Francisco Unified School District to implement Safe Routes to Schools programs and improvements, with an emphasis on schools serving equity priority communities.

Action MOB-3.2.2 Incorporate new street connections. Incorporate new street connections to better distribute vehicle trips across South San Francisco's street network, especially in the East of 101 area as illustrated in Exhibit 3.14-1 and Table 3.14-5.

City of South San Francisco Climate Action Plan

The Climate Action Plan includes the following actions that assist in reducing or avoiding impacts related to land use and planning:

Action TL 2.3 Improve Curb Management. Evaluate the current and best use of curb space in the City's activity centers and repurpose space to maximize people served (i.e., for loading, bikeways, bike parking, bus lanes, EV charging, or parklets).

Action TL 2.5 Development along Transit Corridors. For all new land use and transportation projects, adhere to the City's VMT Analysis Guidelines and qualitatively assess the project's effect on multimodal access. Use the development review process to identify opportunities to enhance bicycle, pedestrian, and transit connectivity.

Action TL 2.6 Complete Streets Policy. Ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled. Develop a Capital Improvement Program (CIP) prioritization criteria, including equity considerations for SB 1000 neighborhoods, to strategically advance multimodal complete streets projects. All capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans.

Action TL 2.8 Improve Transit Station Access. Leverage public-private partnerships to increase transit ridership and improve transit station access by incorporating first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.

City of South San Francisco Municipal Code

Chapter 13.16 Underground Utility Installations

Chapter 13.16 of the Municipal Code contains regulations for the installation, maintenance, use, and removal of underground utilities as well as responsibilities of property owners and utility companies.

Chapter 14.14 Sewer Lateral Construction, Maintenance, and Inspection

Chapter 14.14 of the Municipal Code contains regulations regarding the operation and maintenance of the City's sewer system, elimination of minimization of sewer overflows, compliance with applicable legal requirements pertaining to the City's sewer system and performance standards for private sewer laterals that connect or are connected to a public sewer main.

Chapter 19.16 General Design and Improvement Standards

Section 19.16.030 (Utility Easements) states that easements not less than 10 feet wide shall be required within or across lots where necessary for underground utilities, cables, wires, street trees, drainage, conduit and water mains or other utilities.

City of South San Francisco Zoning Ordinance

The following chapters of the South San Francisco Zoning Ordinance, including the new or revised chapters of the Zoning Ordinance that are part of the proposed project, assist in reducing or avoiding impacts related to land use and planning.

Allowable land uses and development standards are defined for each Base Zoning District, Overlay District, and Specific and Area Plan Districts to preserve, protect, and enhance the character of the City's different neighborhoods and the quality of life of City residents. Some of the development standards include building heights, building setbacks, and landscaping requirements. The Zoning Districts are listed below:

- Chapter 20.060, Establishment of Conventional Zoning Districts (revised)
- Chapter 20.070, Residential Zoning Districts (revised)
- Chapter 20.080, Downtown Residential Zoning Districts (revised)
- Chapter 20.090, Downtown/Caltrain Station Area Zoning Districts (revised)
- Chapter 20.100, Non-Residential Districts (revised)
- Chapter 20.110, Civic Districts (revised)
- Chapter 20.120, Public and Semi-Public Zoning Districts (existing)
- Chapter 20.135, Form-Based Zoning Districts (new)
- Chapter 20.140, Planned Development District (existing)
- Chapter 20.170, Special Environmental Studies Overlay District (existing)
- Chapter 20.180, Flood Plain/Sea Level Rise Overlay (new)
- Chapter 20.230, Oyster Point Specific Plan District (revised)
- Chapter 20.260, Genentech Master Plan District (revised)
- Chapter 20.270, El Camino Real/Chestnut Avenue Area Plan District (existing)

Chapter 20.300 Lot and Development Standards (revised)

The purpose of this chapter is to prescribe development and site standards that apply, except where specifically stated, to development in all districts. These standards shall be used in conjunction with the standards for each zoning district located in Division II, Base and Overlay District Regulations or Division III, Form-Based Zoning Districts.

Section 20.300.014 (Underground Utilities) (revised) requires that all exterior utilities, including but not limited to drainage systems, sewers, natural gas lines, water, electrical, telephone, cable television, and similar distribution lines providing direct service to a development site shall be installed and maintained underground within a project site. Further, all on-site underground utilities shall be designed and installed to minimize the disruption of off-site utilities, paving and landscaping during construction and maintenance.

Chapter 20.480 Design Review (existing)

This chapter establishes the procedure for design review. The purpose of the provisions is to provide a review procedure to ensure that development is designed to support General Plan policies to preserve the scale and character of established neighborhoods and improve the community orientation of new development. Design review is intended to promote high-quality design, well-

crafted and maintained buildings and landscaping, the use of high-quality building materials, and attention to the design and execution of building details and amenities in both public and private projects.

Genentech Master Plan

The Genentech Master Plan was adopted in November 2020 and focuses on the approximately 207-acre property that comprises the Genentech Campus in eastern South San Francisco, adjacent to the San Francisco Bay. The Master Plan envisions new growth, intensification of development and infill, promotes alternative modes of transportation and ensures consistency and reliability with the City's regulatory land use tools.

Oyster Point Specific Plan

The Oyster Point Specific Plan was adopted in February 2011. The intent of the Specific Plan is to transform 81 acres of underutilized, under developed, and environmentally challenging Bay front land in South San Francisco into a sustainable mixed-use development that will include a state-of-the-art life science campus, a park and recreation destination, a vibrant marina environment, and a site that can accommodate commercial and hotel land uses.

3.10.4 - Methodology

This analysis identifies potential impacts related to the division of an established community and consistency with land use plans, policies, or regulation used for the purpose of avoiding or mitigating an environmental affect. Potential impacts are based on development anticipated from the proposed project (collectively, the General Plan Update, Zoning Code Amendments, and Climate Action Plan) at full buildout. Impacts to land use and planning were assessed using the significance criteria established by the California Environmental Quality Act (CEQA) Guidelines, as well as State, and local plans, regulations, and ordinances.

3.10.5 - Thresholds of Significance

According to CEQA Guidelines Appendix G Environmental Checklist, to determine whether land use and planning impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Physically divide an established community?

b) 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?

3.10.6 - Project Impacts Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where appropriate.

Divide an Established Community

Impact LAND-1: The proposed project would not physically divide an established community.

Development under the proposed project would result in additional residential and nonresidential development projects throughout the Planning Area. Because South San Francisco is a fully built city, new development is anticipated to occur on parcels that already contain some existing homes or businesses. The City's primary approach to accommodating growth is to locate new housing and jobs in the East of 101, Lindenville, Downtown, and El Camino planning subareas (Exhibit 2-4) that are well served by Caltrain, BART, or SamTrans service and have good access to opportunity (such as jobs, neighborhood amenities, and health care facilities). The physical division of an established community typically refers to the construction of a physical feature (such as a wall, interstate highway, or railroad tracks) or the removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and outlying areas. The proposed project does not contemplate or authorize any such physical changes to the community. Rather, the proposed project includes new streets and bridges/elevated roadways, additional bus lanes, and new trail connections to improve multimodal transportation and reduce transportation injury collisions.

The General Plan Update contains a multitude of policies and actions to require and ensure community connectivity as buildout occurs. Policy LU-1.2 requires connectivity in complete neighborhoods. Policy LU-1.4 requires the maintenance and expansion of public facilities and services including co-locating new public projects near compatible civic uses, thereby encouraging community connectivity. Policy LU-1.7 facilitates the construction of new neighborhoods in Lindenville and East of 101 that are well connected. Policies LU-2.1 and LU-2.3 prioritize development near transit centers and transit-oriented communities with strong pedestrian, shuttle, and bicycle connections. Policy LU-6.1 prohibits the introduction of new residential, commercial, and other nonresidential uses in areas designated as Mixed Industrial High to preserve land for industrial uses. Policy LU-6.2 prohibits additional encroachment of incompatible uses into industrial areas in Lindenville and East of 101, except where residential growth is planned. Policy LU-7.1 promotes complete neighborhoods that provide convenient access to a range of goods and services. Policy LU-7.5 fosters pedestrian and bicycle access. Policy LU-8.3 requires the improvement of pedestrian connections and sidewalk infrastructure. Policy MOB-2-1 requires the incorporation of complete streets improvements into all roadway and development projects. Action MOB-2.1.1 ensures that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled. Action MOB-2.1.3 implements the Active South City Pedestrian and Bicycle Plan. Action MOB-2.2.1 requires collaboration with the SSFUSD to implement Safe Routes to Schools programs and improvements, with an emphasis on schools serving equity priority communities. Action MOB-3.2.2 incorporates new street connections to better distribute vehicle trips across South San Francisco's street network, especially in the East of 101 area as illustrated in Section 3.14, Transportation, Exhibit 3.14-1 and Table 3.14-5.

The Climate Action Plan (CAP) includes a number of actions to ensure community connectivity as buildout occurs. Implementation of Action TL 2.3 would evaluate the current and best use of curb space in the City's activity centers and repurpose space to maximize people served (i.e., for loading, bikeways, bike parking, bus lanes, EV charging, or parklets). Implementation of Action TL 2.5 would ensure that all new land use and transportation projects adhere to the City's Vehicle Miles Traveled

(VMT) Analysis Guidelines and qualitatively assess the proposed project's effect on multimodal access. Implementation of Action TL 2.5 would allow for the use of the development review process to identify opportunities to enhance bicycle, pedestrian, and transit connectivity. Implementation of Action TL 2.6 would ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users and that development projects contribute to multimodal improvements in proportion to their potential impacts on VMT. Implementation of Action TL 2.8 would improve transit station access by leveraging public-private partnerships to increase transit ridership and improve transit station access by incorporating first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.

The South San Francisco Zoning Ordinance, including the new or revised chapters of the Zoning Ordinance that are part of the proposed project, define allowable land uses and development standards for each Base Zoning District, Overlay District, and Specific and Area Plan Districts. Some of the development standards include building heights, building setbacks, and standards for fences and walls to ensure that community connectivity is maintained as future development occurs within the Planning Area. In addition, Section 20.300.014 (Underground Utilities) requires that all exterior utilities, including but not limited to drainage systems, sewers, natural gas lines, water, electrical, telephone, cable television, and similar distribution lines providing direct service to a development site shall be installed and maintained underground within a project site. Further, all on-site underground utilities shall be designed and installed to minimize the disruption of off-site utilities, paving and landscaping during construction and maintenance.

The South San Francisco Municipal Code contains rules and regulations to ensure community connectivity as buildout occurs. Chapter 13.16 (Underground Utility Installations) contains regulations for the installation, maintenance, use, and removal of underground utilities as well as responsibilities of property owners and utility companies. Chapter 14.14 (Sewer Lateral Construction, Maintenance, and Inspection) contains regulations regarding the operation and maintenance of the City's sewer system. Section 19.16.030 (Utility Easements) states that easements not less than 10 feet wide shall be required within or across lots where necessary for underground utilities, cables, wires, street trees, drainage, conduit and water mains or other utilities.

With implementation of the General Plan Update and CAP policies and actions, the proposed project would support community connectivity rather than support development that could divide an established community. New development that occurs within South San Francisco is anticipated to consist of infill development and redevelopment of existing developed properties. Generally, these types of development characteristics do not divide established communities, as they typically occur within individual parcels or adjoining parcels. Future development occurring under the proposed project would be required to demonstrate consistency with the applicable regulations requiring connectivity including, but not limited to, those listed in this section of the Draft Program EIR, including the South San Francisco Municipal Code and Zoning Ordinance. For these reasons, the proposed project would not physically divide an established community. Impacts would be less than significant.

Level of Significance

Less than significant impact.

Conflict with Applicable Plans, Policies, or Regulations

Impact LUP-2: The proposed project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Development under the proposed project would result in additional residential and nonresidential development projects throughout the Planning Area. As South San Francisco is a fully built out city, the majority of potential growth under the proposed project would occur within the East of 101, Lindenville, Downtown, and El Camino planning subareas (Exhibit 2-5). Additionally, the proposed project may result in other private and public improvements throughout the City with the potential to conflict with applicable plans, policies, or regulations (see Chapter 2, Project Description, Sections 2.5.2, 2.5.5, and 2.5.6).

In accordance with Government Code Section 65300, the General Plan Update includes the seven mandatory elements. As allowed, the General Plan Update has combined these elements and added additional relevant elements (See also Chapter 2, Project Description, Section 2.5.4). These elements will be submitted for review and approval by applicable State agencies in conformance with General Plan Update requirements under State Planning and Zoning law. Also consistent with Government Code Section 65300, the General Plan Update is internally consistent, plans for the long term (horizon year of 2040), includes all land within the City limits and SOI (Planning Area) and is readily available to the public. Therefore, the General Plan Update is consistent with Government Code Section 65300.

The proposed project would draft new and revise existing elements of the City's current general plan. As such, the adoption of the General Plan Update would serve as a self-mitigating aspect of the proposed project and inconsistency with the existing general plan prior to the update would not be considered a potential significant impact.

Likewise, the City's Zoning Code Amendments would be revised to implement the proposed project, consistent with State Law (Government Code § 65860(a)). The Zoning Code Amendments would translate the General Plan Update policies into specific requirements, development standards and performance criteria to guide the review and consideration of individual development projects.

The General Plan Update, Zoning Code Amendments, and CAP all include various regulations with the intention of avoiding or mitigating environmental effects. The Zoning Code Amendments are necessary to implement the General Plan Update and are therefore internally consistent. The City's CAP was designed in concert with the General Plan Update to provide clear policy guidance to City staff and decision-makers on how to reduce greenhouse gas (GHG) emissions and therefore, inherently mitigates environmental effects. Furthermore, the CAP aligns with new State regulations and targets related to climate change. The potential environmental impacts related to the implementation of these regulatory documents is considered throughout this Draft Program EIR. Lastly, the proposed project would be consistent with the City's various Specific Plans, Master Plans, and Area Plans (as summarized in subsection 3.10.3, Regulatory Framework) as evidenced by the General Plan Update's Action LU-2.1.3, which requires the review and update of existing plans to ensure consistency.

Future development under the proposed project would be required by the City to demonstrate consistency with applicable federal, State, and local policies including those mitigating or avoiding environmental impacts through the mechanisms of project permitting and approvals.

Senate Bill 375 and Plan Bay Area 2050

Plan Bay Area 2050, published by MTC and ABAG, is a 30-year long-range strategic plan focused on the interrelated elements of housing, the economy, transportation, and the environment. As a regional land use plan, Plan Bay Area 2050 aims to reduce per capita GHG emissions by promoting more compact, mixed-use residential and commercial neighborhoods located near transit, and therefore aims to reduce and/or mitigate environmental impacts. Plan Bay Area 2050 is a limited and focused update that builds upon a growth pattern and strategies developed in the original Plan Bay Area (adopted by MTC in 2013) but with updated planning assumptions that incorporate key economic, demographic, and financial trends from the last 4 years. Plan Bay Area 2050 supports smart growth principles and land use planning while promoting well designed sustainable development. Plan Bay Area 2050 implements Senate Bill (SB) 375; however, SB 375 does not directly require local land use policies, regulations, or general plans to be consistent with Plan Bay Area 2050.[10] Instead, it requires consistency between regional transportation planning processes and local housing planning processes. Nonetheless, because both Plan Bay Area 2050 and the General Plan Update use similar growth projections and were developed in consideration of each other, the General Plan Update would not be expected to conflict with Plan Bay Area 2050. (See Section 3.7, Greenhouse Gas Emissions, for an additional discussion of the proposed project's consistency with Plan Bay Area 2050.)

Airport Land Use Compatibility Plan

The proposed project would intensify land uses within the East of 101, Lindenville, Downtown, and El Camino planning subareas in order to create more housing units and employment opportunities. Portions of proposed mixed-use residential land use designations are located within SFO's runway safety zone boundaries and 65 decibel (dB) CNEL noise contour. Some of the Planning Area is located within the 70 dB CNEL noise contour (Exhibit 3.11-2). The proximity of residential units to SFO would require that residential developments in this area undergo federal, State, and local regulatory review processes specific to airport noise, airspace safety, and other land use compatibility standards, including 14 Code of Federal Regulations Part 77 regulations for the safety, efficient use, and preservation of navigable airspaces. The SFO ALUCP requires grant of an avigation easement as a condition of allowing residential development within the 65 dB contour. Disclosure regarding airport noise is also required under South San Francisco Municipal Code Chapter 15.58. Residential uses are designated as incompatible with the 70 dB counter and higher. Residential uses East of 101 would experience significant noise disturbances from aircraft departures. See Section 3.11, Noise, for further analysis.

As discussed in Section 3.8, Hazards and Hazardous Materials, Impact HAZ-5, portions of the Mixed Industrial High, Business Technology Park High, East of 101 Mixed Use, High Density Mixed Use, Urban Residential, and El Camino Mixed Use High land use designations are located within various Safety Compatibility Zones. Future projects within the Mixed Industrial High land used designations

[10] Association of Bay Area Governments (ABAG), Metropolitan Transportation Commission (MTC). 2021. Plan Bay Area 2050. October 21.

have the potential to conflict with Zone 2 restrictions. Future projects within the Business Technology Park, East of 101 Mixed Use, and High-Density Mixed-Use land use designations have the potential to conflict with Zone 3 restrictions. Furthermore, future projects within the El Camino Mixed Use High land use designation have the potential to conflict with Zone 4 restrictions. See Section 3.8, Hazards and Hazardous Materials, Impact HAZ-5 for further discussion.

As recognized in the General Plan Update, the ALUCP for the Environs of SFO specifies how land near airports is to be used, based on safety and noise compatibility considerations, develops height restrictions for new development to protect airspace in the vicinity of the airport, and establishes construction standards for new buildings near airports, including sound insulation requirements. Local plans, policy actions, or development activities that affect areas within that boundary must receive ALUC approval or have a finding of overriding considerations prior to local permit issuance. The SFO ALUCP requires all residential development within Area A, which is the entirety of San Mateo County, to provide real estate disclosures (see SFO ALUCP Appendix G-7). Additionally, within Area B, the ALUC (C/CAG of San Mateo County) is responsible for reviewing proposed land use policy actions, including new general plans, specific plans, zoning ordinances, plan amendments and rezoning, and land development proposals. As such, the City is required to submit the General Plan Update to the ALUC for review and approval. Further, future development within the SFO ALUCP areas must also be referred to the ALUC for a determination of consistency. Future development under the proposed project would be evaluated for consistency with the 2011 California Airport Land Use Planning Handbook and the SFO ALUCP. In reviewing individual project applications, the City would determine which policies and actions apply and whether project modifications would be required to ensure compatibility with the ALUCP, depending on the specific characteristics of the project type and/or project site during the development review process. Buildings within the ALUCP area would be required to comply with FAA regulations for height.

Furthermore, the General Plan Update includes policies and actions related to land use compatibility. Action SA-12.5.1 requires the General Plan to be in conformance with land use compatibility standards in the ALUCP. Policy SA-21.3 allows building heights within maximum limits permitted under FAA regulations. These actions, along with the requirements of the ALUCP and South San Francisco Municipal Code ensure that future development would be consistent with the ALUCP. Therefore, the proposed project would not cause a significant environmental impact due to a conflict with ALUCP for the purpose of avoiding or mitigating an environmental effect. Impacts would be less than significant.

San Francisco Public Utilities Commission

The SFPUC has several water transmissions pipelines that traverse the City, generally in a north–south direction within right-of-way lands that are typically 80 feet wide (Exhibit 3.10-1). Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area, some of which may occur along SFPUC right-of-way lands. The SFPUC has an established, formal process that may permit a secondary use on the right-of-way but otherwise does not permit secondary use without consent. It also maintains a Right-of-Way Encroachment Removal Policy and a Right-of-Way Vegetation Management Plan that addresses existing and future encroachments, maintenance and security. As such, future buildout of the

proposed project located within SFPUC right-of-way would be required to apply for and have approved any secondary use through the SFPUC's formal process. This would ensure that the future development would not conflict with SFPUC right-of-way regulations adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would be less than significant.

Level of Significance

Less than significant impact.

3.10.7 - Cumulative Impacts

The geographic context for analysis of cumulative impacts related to land use and planning generally includes the Planning Area and San Mateo County. This analysis evaluates whether impacts of the proposed project, together with impacts of cumulative development, could result in a cumulatively significant impact to land use and planning. This analysis then considers whether the incremental contribution of impacts associated with implementation of the proposed project would be significant. Both conditions must apply for a project's cumulative effects to rise to the level of significance.

Cumulative development is likely to continue occurring in the surrounding incorporated and unincorporated areas of San Mateo County. However, most of this development would take place in urbanized areas as infill development and not require significant land use changes that would create land use conflicts, nor would they divide existing communities. Development would be subject to the land use plans, policies, and regulations of the applicable jurisdiction. As such, development within incorporated and unincorporated areas of San Mateo County is not likely to create significant land use conflicts or divide existing communities. For these reasons cumulative impacts with respect to land use would be less than significant.

The proposed project's incremental contribution to cumulative land use impacts would also not be significant. The land uses allowed under the proposed project provide opportunities for cohesive new growth and redevelopment on existing parcels within developed areas. As discussed under Impacts LUP-1 and LUP-2, the proposed project would promote strategic development alongside existing land uses. The proposed General Plan Update contains policies and actions that support a connected community and promotes a network of pedestrian and bicycle trails that enhance neighborhoods. Implementation of the proposed project would not include approval of linear infrastructure projects that may create a barrier or physically divide an established community. By establishing a framework that guides development to meet the future needs of the City, it does not conflict with any applicable land use plan, policy, or regulation, adopted for the purpose of avoiding or mitigating an environmental effect, including the SFO ALUCP or SFPUC regulations. As such, development anticipated under the proposed project would not create substantial land use impacts or result in the physical division of existing communities. New development and redevelopment consistent with the proposed project would be designed to complement the character of existing neighborhoods and provide connectivity between existing development and new development within the cumulative analysis area. Further, the proposed project does not approve the construction or development of any new roadways, walls, bridges, major infrastructure, or other

features that would divide existing neighborhoods within the cumulative analysis areas. Accordingly, the proposed project's contribution to cumulative impacts would also be less than significant.

Level of Cumulative Significance

Less than significant impact.

Legend

- Treatment Plants
- Transmission Lines
  - Penstock
  - Pipeline
  - Siphon
  - Tunnel
- SFPUC Parcels / Right of Way
  - Other / Uncertain
  - Easement
  - Fee-owned
  - Raker Act
- Major Roads
  - <all other values>
  - Interstate
  - US Highway
  - State Highway
  - Major Road
- SFPUC Reservoirs
- Cities

Source: Hetch Hetchy Regional Water System, 03/17/2021.

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Exhibit 3.10-1
SFPUC Water Transmission Pipeline Right-of-Way

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3.11 - Noise and Vibration

3.11.1 - Introduction

This section of the Draft Program Environmental Impact Report (Draft Program EIR) addresses potential physical environmental effects related to noise and vibration within the South San Francisco General Plan Update Planning Area (Planning Area) resulting from implementation of the General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project). Future discretionary projects facilitated by the proposed project will be evaluated for project-specific impacts related to noise and vibration at the time they are proposed. Descriptions and analysis in this section are based, in part, on noise modeling performed by FirstCarbon Solutions (FCS). The noise modeling output is included in Appendix G of this Draft Program EIR.

The following is a summary of comments related to Noise received in response to the Notice of Preparation (NOP). The comment letters are included in Appendix A.

- States that the portions of the proposed mixed-use residential areas east of U.S. Highway 101 (US-101) are within the airport's runway safety zone boundaries and 65 decibel (dB) Community Noise Equivalent (CNEL) noise contour.
- Requests that the Draft Program EIR evaluate consistency of the proposed project with all regulatory requirements and policies identified in the Comprehensive Airport Land Use Compatibility Plan (ALUCP) for the environs of San Francisco International Airport (SFO).
- Recommends that residential uses be discouraged within the 65 dB CNEL noise contour.
- Recommends that noise impacts on sensitive receptors and any necessary mitigation measures be fully evaluated in the Draft Program EIR.
- States that noise impacts have a disproportionate impact on communities of color in South San Francisco.

The descriptions and analysis in this section are based, in part, on statements, data, and figures provided by the following reference materials:

- South San Francisco General Plan Update.
- California Department of Transportation, various technical manuals.
- South San Francisco Municipal Code.
- 2012 SFO ALUCP.

3.11.2 - Environmental Setting

Characteristics of Noise

Noise is defined as unwanted sound. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Sound is produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to

measure the intensity of sound and are described in terms of dB. The dB is a logarithmic unit, which expresses the ratio of the sound pressure level being measured to a standard reference level. The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of less than 3 dB are only perceptible in laboratory environments. Audible increases in noise levels generally refer to a change of 3 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. Only audible changes in existing ambient or background noise levels are considered potentially significant.

A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies that are audible to the human ear.

Because decibels are logarithmic units, they cannot be added or subtracted by ordinary arithmetic means. For example, if one noise source produces a noise level of 70 dB, the addition of another noise source with the same noise level would not produce 140 dB; rather, they would combine to produce a noise level of 73 dB.

Noise Descriptors

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq} and CNEL or the day-night average level (L_{dn}) based on dBA. CNEL is the time-varying noise over a 24-hour period, with a 5 dBA weighting factor[1] applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during the evening hours. CNEL and L_{dn} are within one dBA of each other and are normally exchangeable. These measurement metrics reflect a person's cumulative exposure to sound over a 24-hour period. The noise weighting factor adjustments (adding 5 dBA or 10 dBA to each evening or nighttime hourly average respectively) are added to account for higher sensitivity to noise exposure during evening or nighttime hours.

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of maximum levels denoted by L_{max} for short-term noise impacts. L_{max} reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

Noise Propagation

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on whether the source is a point or line source, as well as ground absorption, atmospheric effects and refraction, and shielding by natural and manmade

[1] This means that the indicated decibel amounts are added to the hourly evening or hourly nighttime averages.

features. Sound from point sources, such as an air conditioning condenser, a piece of construction equipment, or an idling truck, radiates uniformly outward as it travels away from the source in a spherical pattern.

The attenuation or sound drop-off rate is dependent on the conditions of the land between the noise source and receiver. To account for this ground-effect attenuation (absorption), two types of site conditions are commonly used in noise models: soft-site and hard-site conditions. Soft-site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. For point sources, a drop-off rate of 7.5 dBA per each doubling of the distance (dBA/DD) is typically observed over soft ground with landscaping, as compared with a 6 dBA/DD drop-off rate over hard ground such as asphalt, concrete, stone, and very hard packed earth. For line sources, such as traffic noise on a roadway, a 4.5 dBA/DD is typically observed for soft-site conditions compared to the 3 dBA/DD drop-off rate for hard-site conditions. Table 3.11-1 briefly defines these measurement descriptors and other sound terminology used in this section.

Table 3.11-1: Sound Terminology

Term	Definition
Sound	A vibratory disturbance created by a vibrating object which, when transmitted by pressure waves through a medium such as air, can be detected by a receiving mechanism such as the human ear or a microphone.
Noise	Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
Ambient Noise	The composite of noise from all sources near and far in a given environment.
Decibel (dB)	A unitless measure of sound on a logarithmic scale, which represents the squared ratio of sound pressure amplitude to a reference sound pressure. The reference pressure is 20 micropascals, representing the threshold of human hearing (0 dB).
A-weighted Decibel (dBA)	An overall frequency-weighted sound level that approximates the frequency response of the human ear.
Equivalent Noise Level (L_{eq})	The average sound energy occurring over a specified time period. In effect, L_{eq} is the steady-state sound level that in a stated period would contain the same acoustical energy as the time-varying sound that actually occurs during the same period.
Maximum and Minimum Noise Levels (L_{max} and L_{min})	The maximum or minimum instantaneous sound level measured during a measurement period.
Day-Night Level (DNL or L_{dn})	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring between 10 p.m. and 7 a.m. (nighttime).

Term	Definition
Community Noise Equivalent Level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the A-weighted sound levels occurring between 7 p.m. and 10 p.m. and 10 dB added to the A-weighted sound levels occurring between 10 p.m. and 7 a.m.
Source: Data compiled by FirstCarbon Solutions (FCS) 2022.	

Traffic Noise

The level of traffic noise depends on three primary factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the number of trucks in the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and greater number of trucks. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires. Because of the logarithmic nature of noise levels, a doubling of the traffic volume (assuming that the speed and truck mix do not change) results in a noise level increase of 3 dBA. Based on the Federal Highway Administration (FHWA) community noise assessment criteria, this change is “barely perceptible”; for reference a doubling of perceived noise levels would require an increase of approximately 10 dBA. The truck mix on a given roadway also has an effect on community noise levels. As the number of heavy trucks increases and becomes a larger percentage of the vehicle mix, adjacent noise levels increase.

Stationary Noise

A stationary noise producer is any entity in a fixed location that emits noise. Examples of stationary noise sources include machinery, engines, energy production, and other mechanical or powered equipment and activities such as loading and unloading or public assembly that may occur at commercial, industrial, manufacturing, or institutional facilities. Furthermore, while noise generated by the use of motor vehicles over public roads is preempted from local regulation by the FHWA, the use of these vehicles is typically considered to be a stationary noise source when operated on private property such as at a truck terminal or warehousing facility. The emitted noise from the producer may be reduced to acceptable levels either at the source or on the adjacent property through the use of proper planning, setbacks, block walls, acoustic-rated windows, dense landscaping, or by changing the location of the noise producer.

The effects of stationary noise depend on factors such as characteristics of the equipment and operations, distance and pathway between the generator and receptor, and weather. Stationary noise sources may be regulated at the point of manufacture (e.g., equipment or engines), with limitations on the hours of operation, or with provision of intervening structures, barriers, or topography.

Construction activities are a common source of stationary noise. Construction-period noise levels generally are higher than background ambient noise levels but eventually cease once construction is complete. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the

character of the noise generated on each construction site, and therefore, would change the noise levels as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 3.11-2 shows typical noise levels of construction equipment as measured at a distance of 50 feet from the operating equipment.

Table 3.11-2: Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Impact Pile Driver	95
Auger Drill Rig	85
Vibratory Pile Driver	95
Jackhammers	85
Pneumatic Tools	85
Pumps	77
Scrapers	85
Cranes	85
Portable Generators	82
Rollers	85
Bulldozers	85
Tractors	84
Front-end Loaders	80
Backhoe	80
Excavators	85
Graders	85
Air Compressors	80
Dump Truck	84
Concrete Mixer Truck	85
Pickup Truck	55

Notes:
dBA = A-weighted decibel
Source: Federal Highway Administration (FHWA). 2006. Highway Construction Noise Handbook, August.

Noise from Multiple Sources

Because sound pressure levels in decibels are based on a logarithmic scale, they cannot be added or subtracted in the usual arithmetical way. Therefore, sound pressure levels in decibels are logarithmically added on an energy summation basis. In other words, adding a new noise source to an existing noise source, both producing noise at the same level, will not double the noise level.

Instead, if the difference between two noise sources is 10 dBA or more, the louder noise source will dominate, and the resultant noise level will be equal to the noise level of the louder source. In general, if the difference between two noise sources is 0–1 dBA, the resultant noise level will be 3 dBA higher than the louder noise source, or both sources if they are equal. If the difference between two noise sources is 2–3 dBA, the resultant noise level will be 2 dBA above the louder noise source. If the difference between two noise sources is 4–10 dBA, the resultant noise level will be 1 dBA higher than the louder noise source.

Characteristics of Vibration

Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of groundborne vibrations typically only cause a nuisance to people, but in extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Groundborne noise is an effect of groundborne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room, and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude such as the maximum instantaneous peak in the vibrations velocity, which is known as the peak particle velocity (PPV) or the root mean square (rms) amplitude of the vibration velocity. Because of the typically small amplitudes of vibrations, vibration velocity is often expressed in decibels—denoted as LV—and is based on the reference quantity of 1 microinch per second. To distinguish vibration levels from noise levels, the unit is written as “VdB.”

When assessing annoyance from groundborne vibration, vibration is typically expressed as rms velocity in units of decibels of 1 microinch per second, with the unit written in VdB. Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. Human perception to vibration starts at levels as low as 67 VdB. Annoyance due to vibration in residential settings starts at approximately 70 VdB.

Off-site sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible groundborne noise or vibration. Construction activities, such as blasting, pile driving and operating heavy earthmoving equipment, are common sources of groundborne vibration. Construction vibration impacts on building structures are generally assessed in terms of PPV. Typical vibration source levels from construction equipment are shown in Table 3.11-3.

Table 3.11-3: Vibration Levels of Construction Equipment

Construction Equipment	PPV at 25 Feet (inches/second)	rms Velocity in Decibels (VdB) at 25 Feet
Water Trucks	0.001	57
Scraper	0.002	58

Construction Equipment	PPV at 25 Feet (inches/second)	rms Velocity in Decibels (VdB) at 25 Feet
Bulldozer—small	0.003	58
Jackhammer	0.035	79
Concrete Mixer	0.046	81
Concrete Pump	0.046	81
Paver	0.046	81
Pickup Truck	0.046	81
Auger Drill Rig	0.051	82
Backhoe	0.051	82
Crane (Mobile)	0.051	82
Excavator	0.051	82
Grader	0.051	82
Loader	0.051	82
Loaded Trucks	0.076	86
Bulldozer—large	0.089	87
Caisson drilling	0.089	87
Vibratory Roller—small	0.101	88
Compactor	0.138	90
Clam shovel drop	0.202	94
Vibratory Roller—large	0.210	94
Pile Driver (impact-typical)	0.644	104
Pile Driver (impact-upper range)	1.518	112

Notes:
PPV = peak particle velocity
rms = root mean square
VdB = velocity in decibels
Source: Compilation of scientific and academic literature, generated by Federal Transportation Administration (FTA) and Federal Highway Administration (FHWA).

The propagation, or spread, of groundborne vibration is not as simple to model as airborne noise. This is because noise in the air travels through a relatively uniform medium, while groundborne vibrations travel through the earth, which may contain significant geological differences. Factors that influence groundborne vibration include:

- **Vibration source:** Type of activity or equipment, such as impact or mobile, and depth of vibration source;
- **Vibration path:** Soil type, rock layers, soil layering, depth to water table, and frost depth; and
- **Vibration receiver:** Foundation type, building construction, and acoustical absorption.

Among these factors that influence groundborne vibration, there are significant differences in the vibration characteristics when the source is underground compared to at the ground surface. In addition, soil conditions are known to have a strong influence on the levels of groundborne vibration. Among the most important factors are the stiffness and internal damping of the soil and the depth to bedrock. Vibration propagation (spread) is more efficient in stiff clay soils than in loose sandy soils, and shallow rock seems to concentrate the vibration energy close to the surface and can result in groundborne vibration problems at large distance from the source. Factors such as layering of the soil and depth to the water table can have significant effects on the propagation of groundborne vibration. Soft, loose, sandy soils tend to attenuate more vibration energy than hard, rocky materials. Vibration propagation through groundwater is more efficient than through sandy soils. There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse, or side-to-side, and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil type, but it has been shown to be effective enough for screening purposes in order to identify potential vibration impacts that may need to be studied through actual field tests. The vibration level (calculated below as "PPV") at a distance from a point source can generally be calculated using the vibration reference equation:

$$PPV = PPV_{ref} * (25/D)^n \text{ (in/sec)}$$

Where:

PPV_{ref} = reference measurement at 25 feet from vibration source
D = distance from equipment to the receptor
n = vibration attenuation rate through ground

According to Section 7 of the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual, an "n" value of 1.5 is recommended to calculate vibration propagation through typical soil conditions.[2]

Existing Noise Sources

The primary operational sources of noise generated within the City of South San Francisco are vehicular traffic, rail, and industrial uses. The City is also affected by air traffic noise associated with SFO.

[2] Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment Manual. September.

Vehicle Traffic Noise

One of the City's most important locational advantages is its excellent road access; however, this access also results in fairly high noise impacts over much of the City. Traffic noise depends primarily on traffic speed—high frequency tire noise increases with speed and the proportion of truck traffic—that generates engine, exhaust, and wind noise. The proximity of freeways and major streets, and the large amount of truck traffic serving industrial, warehousing, and freight forwarding uses in the City, make South San Francisco susceptible to traffic noise. Exhibit 3.11-1 illustrates roadways in the City producing noise levels greater than 65 dBA CNEL.

Traffic noise depends primarily on traffic speed and the proportion of truck traffic. Traffic volume does not have a major influence on traffic noise levels; a doubling of traffic volume results in a 3 dB to 5 dB increase in noise levels. As a result, projected traffic increases on US-101, Interstate 280 (I-280), and major arterials within the City should not have an appreciable impact on noise levels in the City. As traditional industrial uses make way for less intensive research and development, office, and residential activities, it is expected that truck traffic will decline in the City, particularly in areas east of US-101 and in Lindenville.

Existing traffic noise levels along selected roadway segments in the vicinity of the proposed project were modeled using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). Site-specific information is entered, such as roadway traffic volumes, roadway active width, source-to-receiver distances, travel speed, noise source and receiver heights, and the percentages of automobiles, medium trucks, and heavy trucks that the traffic is made up of throughout the day, among other variables. The modeled Average Daily Traffic (ADT) volumes were obtained directly from the traffic data prepared by Fehr & Peers for the proposed project. As detailed in Section 3.14, Transportation, the COVID-19 pandemic has dramatically changed the demand for travel in the Bay Area since March 2020. The effects of the initial shutdown resulted in substantial changes in travel behavior, including a decline in Vehicle Miles Traveled (VMT) and transit ridership, resulting in substantial cuts to transit service levels. While travel behavior has gradually returned to pre-pandemic levels, transit ridership levels have recovered at a slower pace. The existing conditions described in the Transportation section are based on data collected in 2019 prior to the onset of the pandemic. The forecasts for year 2040 conditions are based on regional forecasts prepared by Metropolitan Transportation Commission/Association of Bay Area Governments (MTC/ABAG) and were not adjusted to reflect any lasting effects of COVID-19 on travel. It is MTC/ABAG's belief at this time that the current pandemic would have an impact on the economy in the short-term but not in the long-term.

The model inputs and outputs, including the 60 dBA, 65 dBA, and 70 dBA CNEL traffic noise contour distances, are provided in Appendix G. The modeling provides a conservative analysis as it does not take into account mitigating features such as topography, vegetative screening, fencing, building design, or structure screening. Rather, it assumes a worst-case scenario of having a direct line of site on flat terrain. However, it should be noted that roadway segments that are designated as truck routes or major arterials within the City we modeled to account for the higher volume of heavy duty truck trips that travel along these roadways. A summary of the modeling results is shown in Table 3.11-4.

Table 3.11-4: Existing (Year 2019) Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
I-280–north of Westborough Boulevard	169,400	995	2,142	4,612	86.0
I-280–Westborough Boulevard to Sneath Lane	175,900	1,020	2,196	4,729	86.2
I-380–I-280 to US 101	104,700	723	1,554	3,347	83.9
US 101–I-380 to Oyster Point Boulevard	181,900	1,043	2,244	4,832	85.8
Hillside Boulevard–Lawndale Boulevard to Chestnut Avenue	21,100	67	140	299	69.9
Hillside Boulevard–Chestnut Avenue to Sister Cities Boulevard	20,800	68	139	297	69.4
Hillside Boulevard–Sister Cities Boulevard to School Street	5,800	< 50	61	128	64.3
Sister Cities Boulevard–Hillside Boulevard to San Francisco Drive	19,900	66	135	288	69.2
Sister Cities Boulevard–San Francisco Drive to Airport Boulevard	21,500	69	142	303	69.5
El Camino Real–north of Hickey Boulevard	14,100	< 50	107	229	68.1
El Camino Real–Hickey Boulevard to McLellan Drive	33,300	75	156	333	70.1
El Camino Real–McLellan Drive to Arroyo Drive	21,900	59	119	252	68.3
El Camino Real–Arroyo Drive to Westborough Boulevard	18,800	< 50	111	229	66.9
El Camino Real–Westborough Boulevard to West Orange Avenue	35,000	82	163	344	69.6
El Camino Real–West Orange Avenue to South Spruce Avenue	30,500	69	146	313	70.7
El Camino Real–South Spruce Avenue to Noor Avenue	36,100	84	166	351	69.8
El Camino Real–Noor Avenue to Sneath Lane	35,300	78	162	346	70.4
El Camino Real–Sneath Lane to I-380	45,100	91	190	407	71.5
Grand Avenue–Willow Avenue to Chestnut Avenue	9,300	< 50	< 50	60	60.4
Grand Avenue–Chestnut Avenue to Eucalyptus Avenue	7,700	< 50	< 50	53	59.6

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
Grand Avenue–Eucalyptus Avenue to Orange Avenue	8,300	< 50	< 50	55	59.9
Grand Avenue–Orange Avenue to Magnolia Avenue	7,900	< 50	< 50	54	59.7
Grand Avenue–Magnolia Avenue to Spruce Avenue	7,100	< 50	< 50	< 50	59.2
Grand Avenue–Spruce Avenue to Maple Avenue	6,500	< 50	< 50	< 50	58.9
Grand Avenue–Maple Avenue to Linden Avenue	7,000	< 50	< 50	< 50	59.2
Grand Avenue–Linden Avenue to Airport Boulevard	7,000	< 50	< 50	< 50	59.2
Westborough Boulevard–Callan Drive to Galway Place	21,700	59	118	250	68.3
Westborough Boulevard–Galway Place to I-280	31,100	72	149	318	69.8
Westborough Boulevard–I-280 to El Camino Real	29,400	98	207	446	72.5
Chestnut Avenue–El Camino Real to Mission Road	26,200	65	133	284	69.1
Chestnut Avenue–Mission Road to Commercial Avenue	20,500	< 50	90	193	67.5
Chestnut Avenue–Commercial Avenue to Grand Avenue	8,600	< 50	50	108	64.3
Chestnut Avenue–Grand Avenue to Hillside Boulevard	7,500	< 50	< 50	99	63.7
South Spruce Avenue–El Camino Real to Huntington Avenue	15,800	< 50	57	115	63.1
South Spruce Avenue–Huntington Avenue to Myrtle Avenue	17,900	< 50	61	124	63.6
South Spruce Avenue–Myrtle Avenue to North Canal Street	11,600	< 50	< 50	94	61.7
South Spruce Avenue–North Canal Street to Railroad Avenue	9,500	< 50	< 50	82	61.3
South Spruce Avenue–Railroad Avenue to Grand Avenue	6,600	< 50	< 50	< 50	58.9
South Spruce Avenue–Grand Avenue to Hillside Boulevard	3,200	< 50	< 50	< 50	55.8

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
Notes: ADT = Average Daily Traffic; The ADT values are calculated based on the PM peak-hour traffic volumes multiplied by a factor of 10. CNEL = Community Noise Equivalent Level dBA = A-weighted decibel Year 2019 traffic data provided by Fehr & Peers was used. Source: FirstCarbon Solutions (FCS) 2022.					

Rail Traffic Noise

The number of trains passing through South San Francisco on the Southern Pacific Railroad line is not expected to change significantly. Caltrain ridership is expected to increase and Caltrain is currently working on a business model for service through 2040. The impacts of railroad noise are negligible because the line is generally surrounded by industrial and commercial land uses, which buffer noise emanating from the line, and the proximity of the line to US-101, which is an existing source of noise. Exhibit 3.11-1 illustrates railways in the City producing noise levels greater than 65 dBA CNEL. The Bay Area Rapid Transit (BART) extension to SFO passes through South San Francisco. The BART route is underground before it reaches the South San Francisco Station and remains underground through the San Bruno Station. As BART remains underground through the entirety of the City, airborne noise impacts are expected to remain minor through the 2040 planning horizon. Groundborne noise and vibration impacts have also been determined by BART to be minor, as several measures (floating trackbeds, etc.) have been implemented along this line.

Industrial Noise

Industrial uses are an important part of the noise environment in the City. Industrial noise is generated from on-site activities or from associated truck traffic off-site. While industrial uses in the East of 101 and Lindenville sub-areas do generate noise, impacts on noise-sensitive uses is minimal because of the distance from sensitive receptors.

Air Traffic Noise

The City of South San Francisco experiences air traffic noise impacts because of its close proximity to SFO. Aircraft noise in the City results from aircraft departing from Runway 28 and, to a lesser degree, southbound flights departing from Runway 1. According to the San Francisco International Airport Master Plan Draft EIR, Runways 28 and 1 accommodate approximately 95 percent of departures from the airport. Flights departing from Runway 28 climb directly over noise-sensitive land uses at altitudes between several hundred feet and 2,000 feet, resulting in high pass by noise levels in residential areas, including areas outside the contours that define noise impacted areas. International flights bound for Pacific Rim destinations use Runway 28 exclusively, using large aircraft such as B-747s, which are heavily laden and climb slowly over the noise-sensitive uses located below its flight path. A primary determinant of aircraft noise level is the aircraft classification.

Existing Aircraft Noise Levels

Table 3.11-5 presents the number of existing dwellings and population that are exposed and forecasted to be exposed to aircraft noise above CNEL 65 dBA, 70 dBA, and 75 dBA, based on the 2020 SFO Noise Contours shown on Exhibit 3.11-2.

Table 3.11-5: Impacted Dwellings and Residential Population from Aircraft Noise Levels

CNEL Range (dBA)	2020	
	Existing Housing Units	Resident Population
65 to 70	6,961	21,528
70 to 75	1,939	5,494
75 and over	58	205
Total	8,958	27,228

Notes:
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
Source: The City/County Association of Governments of San Mateo County. 2012. Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. November. Website: http://www.ccag.ca.gov/plansreportslibrary/airport-land-use/. Accessed March 3, 2022.

Existing Airport Noise Contours

The SFO Noise Contours are shown in Exhibit 3.11-2. This figure depicts the Federal Aviation Administration (FAA)-approved year 2020 noise contours respective to SFO.

Single-event Flyover Noise

Noise contours are based on average noise levels. Single-event noises such as aircraft flyovers need to occur frequently and at very high volumes in order to bring average noise levels to 65 dBA CNEL. However, even areas outside the 65 dBA CNEL contours are impacted by flyovers. Thus, even if the 65 dBA CNEL noise contour is expected to shift eastward, flyovers will continue to expose areas throughout the southwestern part of the City to high noise levels.

Airport Land Use Compatibility Plan Noise Standards and Related Requirements

The SFO ALUCP establishes the 65 dBA CNEL contour as the noise impact boundary for SFO. The 65 dBA CNEL noise impact boundary is consistent with noise restrictions in the California Administrative Code, Title 21, Subchapter 6 “Noise Standards.” Local plans, policy actions, or development activities that affect areas within that boundary must receive Airport Land Use Commission (ALUC) approval or have a finding of overriding consideration prior to local permit issuance. The ALUC determines the 65 dBA CNEL boundary by examining both federal and State noise impact boundaries:

- Federal Impact Boundary. The federal 65 dBA CNEL boundary is based on the Noise Exposure Map (NEM), as accepted by the FAA under the Federal Aviation Regulations Part 150 Noise Compatibility Program. This 65 dBA contour serves as the basis for FAA determination of local agency eligibility for federal grant money for noise insulation projects.

- State Impact Boundary. The State boundary is the 65 dBA CNEL boundary as defined by the required airport noise monitoring system. The monitoring system consists of 27 off-site noise monitors, plus two additional monitors near the runway ends. The noise contour is updated each calendar quarter and submitted to San Mateo County and the State Division of Aeronautics. The ALUC uses the latest SFO quarterly noise report to determine the compatibility of land use plans.

Local plans, policy actions, or development activities within the 65 dBA CNEL boundary require the approval of the San Mateo County ALUC prior to local permit issuance. To assist this process, the ALUC has established noise/land use compatibility standards as the basis of plan review. Additionally, the SFO ALUCP contains noise compatibility policies applicable to new development within the 65 dBA CNEL boundary of the SFO ALUCP.

Existing Noise-sensitive Land Uses

Existing noise-sensitive land uses within the City include all types of residential land uses, including single-family duplex/triplex/quadplex, multi-family, and mobile home residential land uses. Schools, churches, and hospitals are also considered noise-sensitive land uses that are located within the City. Noise-sensitive receptors are generally defined as locations where people reside or where the presence of unwanted sound may adversely affect the use of the land.

Existing Groundborne Vibration Levels

The primary source of groundborne vibration generated within the City is rail activity from BART and Caltrain. Based on the FTA Guidelines, the screening distance for conventional railroad activity is 200 feet for residences and other buildings where people sleep. Therefore, groundborne vibration from rail activity could result in levels of annoyance or disturbance for residential type land uses located within 200 feet of existing rail lines within the City. Also as documented in the FTA Guidelines, perceptible vibration levels from loaded truck passings on maintained surface roadways are typically contained within the road right of way. There are no other known major sources of groundborne vibration in the City, other than temporary construction-related vibration.

3.11.3 - Regulatory Framework

Federal

Noise Control Act

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting State and local abatement efforts
- Promoting noise education and research

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees.

Among the agencies now regulating noise are the Occupational Safety and Health Administration (OSHA), which limits noise exposure of workers to 90 dB L_{eq} or less for 8 continuous hours or 105 dB L_{eq} or less for 1 continuous hour; the United States Department of Transportation (USDOT), which assumed a significant role in noise control through its various operating agencies; and the FAA, which regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the FTA. Transit noise is regulated by the federal Urban Mass Transit Administration, while freeways that are part of the interstate highway system are regulated by the FHWA. Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that "noise-sensitive" uses are either prohibited from being sited adjacent to a highway, or alternatively, that developments are planned and constructed in such a manner that minimize potential noise impacts.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by transportation sources, local jurisdictions are limited to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

Federal Transit Administration Standards and Guidelines

FTA has established industry accepted standards for vibration impact criteria and impact assessment. These guidelines are published in its Transit Noise and Vibration Impact Assessment document.[3] The FTA Guidelines include thresholds for construction vibration impacts for various structural categories as shown in Table 3.11-6.

Table 3.11-6: Federal Transit Administration Construction Vibration Impact Criteria

Building Category	PPV (in/sec)	Approximate VdB
I. Reinforced Concrete, Steel, or Timber (no plaster)	0.5	102
II. Engineered Concrete and Masonry (no plaster)	0.3	98
III. Non-engineered Timber and Masonry Buildings	0.2	94
IV. Buildings Extremely Susceptible to Vibration Damage	0.12	90

Notes:
PPV = peak particle velocity
VdB = velocity in decibels
Source: Federal Transit Administration (FTA) 2018. Transit Noise and Vibration Impact Assessment Manual.

State

California General Plan Guidelines

Established in 1973, the California Department of Health Services Office of Noise Control was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the "Land Use Compatibility for Community Noise Environments Matrix," which

[3] Federal Transit Administration (FTA) 2018. Transit Noise and Vibration Impact Assessment Manual.

allows the local jurisdiction to delineate compatibility of sensitive uses with various incremental levels of noise.[4]

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise/land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable. The proposed project is also subject to review under the State of California Environmental Quality Act (CEQA). Appendix G of the CEQA Guidelines provides impact thresholds for potential noise and vibration impacts.

California Building Standards Code

The State of California has established noise insulation standards for new hotels, motels, apartment houses, and dwellings (other than single-family detached housing). These requirements are provided in the 2019 California Building Standards Code (CBC) (California Code of Regulations [CCR] Title 24).[5] As provided in the CBC, the noise insulation standards set forth an interior standard of 45 dBA CNEL as measured from within the structure's interior. When such structures are located within a 65 dBA CNEL (or greater) exterior noise contour associated with a traffic noise along a roadway, an acoustical analysis is required to ensure that interior levels do not exceed the 45 dBA CNEL threshold.

Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

County

City/County Association of Governments of San Mateo County

San Mateo County addresses noise/land use compatibility impacts of SFO in the policies of the *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport*, dated November 2012.[6] The SFO ALUCP includes the following relevant policies and actions that assist in reducing noise and land use incompatibilities.

> **NP-1 NOISE COMPATIBILITY ZONES.** For the purposes of this ALUCP, the projected 2020 CNEL noise contour map from the Draft Environmental Assessment for the Proposed Runway Safety Area Program shall define the boundaries within which noise compatibility policies described in this Section shall apply. Exhibit IV-5 [of the ALUCP] depicts the noise compatibility zones. More detail is provided on Exhibit IV-6 [Exhibit 3.11-2 of this document]. The zones are defined by the CNEL 65, 70 and 75 dB contours.

[4] California Department of Health Services Office of Noise Control, "Land Use Compatibility for Community Noise Environments Matrix," 1976.
[5] California Building Standards Commission. 2019. California Building Standards Code (CCR Title 24), January 1.
[6] City/County Association of Governments of San Mateo County (C/CAG). Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. 2012. Website: https://ccag.ca.gov/wp-content/uploads/2014/10/Consolidated_CCAG_ALUCP_November-20121.pdf. Accessed March 10, 2022.

NP-2 AIRPORT NOISE/LAND USE COMPATIBILITY CRITERIA. The compatibility of proposed land uses located in the Airport noise compatibility zones shall be determined according to the noise/land use compatibility criteria shown in Table IV-1 [of the ALUCP]. The criteria indicate the maximum acceptable airport noise levels, described in terms of Community Noise Equivalent Level (CNEL), for the indicated land uses. The compatibility criteria indicate whether a proposed land use is "compatible," "conditionally compatible," or "not compatible" within each zone, designated by the identified CNEL ranges.

- "Compatible" means that the proposed land use is compatible with the CNEL level indicated in the table and may be permitted without any special requirements related to the attenuation of aircraft noise.
- "Conditionally compatible" means that the proposed land use is compatible if the conditions described in Table IV-1 [of the ALUCP] are met.
- "Not compatible" means that the proposed land use is incompatible with aircraft noise at the indicated CNEL level.

NP-3 GRANT OF AVIGATION EASEMENT. Any action that would either permit or result in the development or construction of a land use considered to be conditionally compatible with aircraft noise of CNEL 65 dB or greater shall be subject to this easement requirement. The determination of conditional compatibility shall be based on the criteria presented in Table IV-1 "Noise/Land Use Compatibility Criteria" [of the ALUCP].

The San Mateo County Airport Land Use Commission (the C/CAG Board) deems it necessary to: (1) ensure the unimpeded use of airspace in the vicinity of SFO; (2) to ensure that new noise-sensitive land uses within the CNEL 65 dB contour are made compatible with aircraft noise, in accordance with California Code of Regulations, Title 21, Section 5014; and (3) to provide notice to owners of real property near the Airport of the proximity to SFO and of the potential impacts that could occur on the property from airport/aircraft operations. Thus, C/CAG shall condition its approval of proposed development upon the owner of the subject property granting an avigation easement to the City and County of San Francisco, as the proprietor of SFO. The local government with the ultimate permitting and approval authority over the proposed development shall ensure that this condition is implemented prior to final approval of the proposed development. If the approval action for the proposed development includes construction of a building(s) and/or other structures, the local permitting authority shall require the grant of an avigation easement to the City and County of San Francisco prior to issuance of a building permit(s) for the proposed building or structure. If the proposed development is not built, then, upon notice by the local permitting authority, SFO shall record a notice of termination of the avigation easement.

NP-4 RESIDENTIAL USES WITHIN CNEL 70 dB CONTOUR. As described in Table IV-1 [of the ALUCP], residential uses are not compatible in areas exposed to noise above CNEL 70 dB and typically should not be allowed in these high noise areas.

NP-4.1 Situations Where Residential Use Is Conditionally Compatible. Residential uses are considered conditionally compatible in areas exposed to noise above CNEL 70 dB only if the proposed use is on a lot of record zoned exclusively for residential use as of the effective date of the ALUCP. In such a case, the residential use must be sound-insulated to achieve an indoor noise level of CNEL 45 dB or less from exterior sources. The property owner also shall grant an avigation easement to the City and County of San Francisco in accordance with Policy NP-3 prior to issuance of a building permit for the proposed building or structure.

NP-4.2 Construction of Additional Dwellings on Lots Occupied by Residential Uses is Incompatible within CNEL 70 dB Contour. The construction of second homes on lots occupied by residential uses and the creation of additional housing units in existing buildings within the CNEL 70 dB contour shall be incompatible and inconsistent with this ALUCP.[7]

Local

South San Francisco General Plan Update

The General Plan Update includes the following relevant policies and actions that assist in reducing or avoiding impacts related to noise and vibration:

Noise Element

Policy NOI-1-1 Ensure new development complies with Noise Compatibility guidelines. Ensure that all new development within the City complies with the Land Use/Noise Compatibility guidelines shown in Table 11 [reproduced in Table 3.11-7 below].

Action NOI-1.1.1 Enforce Exterior and Interior noise limits. Enforce the standards of Table 11 – Land Use/Noise Compatibility Matrix, which specify acceptable exterior and interior noise limits for various land uses throughout the City.

Action NOI-1.1.2 Incorporate noise compatibility conditions of approval. Continue to assess projects through the subdivision, site plan, conditional use permit, and other development review processes and incorporate conditions of approval and mitigation measures that ensure noise compatibility where appropriate.

Action NOI-1.1.3 Require noise study in applicable areas. Require a noise study to be performed and appropriate noise attenuation to be incorporated to reduce interior noise levels to 45 dB CNEL or less prior to approving any multi-family or mixed-use residential development in an area with a CNEL of 65 dB or greater.

[7] It is important to note that this policy is only being listed for completeness purposes and to describe the relevant policies in their entirety. Pursuant to recently adopted Government Code Sections 65852.2, 65852.21, and 66411.7, which require ministerial approval of accessory dwelling units and certain two-unit development and two-lot subdivisions, this particular policy would not be enforceable to override State housing law mandates and impede the construction of such second homes or additional housing units. Thus, this policy would be inapplicable for this document and would not impact the analysis contained herein as it would not be enforceable against such dwellings constructed pursuant to the General Plan.

Action NOI-1.1.4 Enforce Noise Insulation Standards. Continue to enforce the noise insulation standards of the State of California Administrative Code, Title 24 and the Uniform Building Code, Chapter 35 for residential development.

Action NOI-1.1.5 Require noise control for new developments. Require the control of noise at the source through site design, building design, landscaping, hours of operation, and other techniques, for new developments deemed to be noise generators.

Policy NOI-1.2 Enforce Noise Performance Standards. The City enforces the Noise Ordinance noise performance standards.

Table 3.11-7 identifies acceptable exterior and interior noise standards for various land use categories within the City.

Table 3.11-7: Land Use/Noise Compatibility Matrix to Guide New Development

Land Use Categories		CNEL	
Categories	Compatible Uses	Interior[1]	Exterior[2]
Residential	Single-Family, Duplex, Multiple-Family, Mobile Homes, Residence Care	45[3]	65[4]
Commercial	Hotel, Motel, Transient Lodging	45[3]	65
	Commercial, Retail, Bank, Restaurant, Health Clubs	55	–
	Office Buildings, Research and Development, Professional Offices	50	–
	Amphitheater, Concert Hall, Auditorium, Meeting Hall, Movie Theater	50	–
	Manufacturing, Warehousing, Wholesale, Utilities	65	–
Open Space	Parks, Neighborhood Parks, Playgrounds	–	65
Institutional/Public Facility	Churches, Libraries	45[3]	–

Notes:
dB = decibel
CNEL = Community Noise Equivalent Level
UBC = Uniform Building Code
1. Interior environment excludes bathrooms, toilets, closets, and corridors.
2. Outdoor environment limited to private yard of single-family residential; multi-family residential and mobile home park outdoor common space area; hospital patio; park picnic area; school playground; and hotel and motel recreation area.
3. Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided pursuant to UBC requirements.
4. Multi-family developments with private balconies that would not meet the 65 dB CNEL standard are required to provide occupancy disclosure notices to all future tenants regarding potential noise impacts.

Policy NOI-2.1 Require vibration analysis for sensitive receptors. A vibration analysis shall be prepared by a qualified acoustical consultant for any construction-related

activities, located within 100-feet of residential or other sensitive receptors that require the use of pile driving or other construction method that has the potential to produce high vibration levels.

Policy NOI-2.2 Require vibration analysis for rail lines. A vibration analysis shall be prepared by a qualified acoustical consultant for new land use development located within 200-feet of existing rail lines.

Action NOI 1.2.1 Update Municipal Code section related to the Noise Ordinance. Update the Noise Ordinance in the South San Francisco Municipal Code to establish standards for permissible construction hours, and controls related to other potential nuisances such as music, dogs, special events, and mechanical/sound equipment; and encourage enforcement and penalties for violations of the Noise Ordinance. The update should not interfere with the regular course of business in commercial and industrial zones.

- General Activity Noise Performance Standards: Establish general noise performance standards for the City's established land use zones.
- Construction Noise. Continue to restrict construction activities to acceptable time periods.
- Consider constructing temporary sound walls surrounding construction sites during construction.
- Special Event Noise: Allow single-event occurrences at specific sites subject to special permit conditions which alleviate noise to the greatest extent possible. Limit the permissible hours for special single events and the number of special single events that are allowed to take place each year.

Policy NOI-3.1 Require vibration analysis for historic structure protection. Prior to issuance of grading permits for any development project that is located within 150 feet of a historic structure and, if construction activities will require either: (1) pile driving within 150 feet; or (2) utilization of mobile construction equipment within 50 feet of the historic structure, the property owner/developer shall retain an acoustical engineer to conduct a vibration analysis for potential impacts from construction-related vibration impacts onto the historic structure. The vibration analysis shall determine the vibration levels created by construction activities at the historic structure, and if necessary, develop mitigation to reduce the vibration levels to within Caltrans threshold of 0.12 inches per second PPV for historic buildings.

City of South San Francisco Municipal Code

Chapter 8.32 Noise Regulations

The City of South San Francisco Noise Ordinance is codified in Chapter 8.32 of the City's Municipal Code. Table 8.32.030 establishes noise level standards for different land use categories at certain times.

Section 8.32.050 of South San Francisco Municipal Code states that construction, alteration, repair, or landscape maintenance actives which are authorized by a valid City permit shall be allowed on weekdays between the hours of 8:00 a.m. and 8:00 p.m., on Saturdays between the hours of 9:00 a.m. and 8:00 p.m., and on Sundays and holidays between the hours of 10:00 a.m. and 6:00 p.m. or when authorized by a permit and not exceeding 90 dB at a distance of 25 feet or exceeds 90 dB at any point outside a proposed project's property plane.

Additionally, Section 8.32.030 of the Municipal Code states that an exterior noise performance standard of 60 dBA L_{max} may not be exceeded between the hours of 7:00 a.m. and 10:00 p.m. and 50 dBA L_{max} between the hours of 10:00 p.m. and 7:00 a.m. for residential land use. For commercial land use, an exterior noise performance standard of 60 dBA L_{max} may not be exceeded between the hours of 7:00 a.m. and 10:00 p.m. and 55 dBA L_{max} between the hours of 10:00 p.m. and 7:00 a.m. Gateway and Oyster Point Marina have an exterior noise performance standard of 65 dBA L_{max} that may not be exceeded between the hours of 7:00 a.m. and 10:00 p.m. and 60 dBA L_{max} between the hours of 10:00 p.m. and 7:00 a.m. However, according to Section 8.32.060 of the South San Francisco Municipal Code, both Municipal Code sections mentioned above may be granted an exception if an application for construction-related exception is made to and considered by the City Manager or the City Manager's designee.

Chapter 8.26 Neighborhood Nuisance Code

Chapter 8.26 of the Municipal Code sets forth and enforces minimum standards relating to the management of residential properties to protect welfare of the residential properties, including noise standards. Section 8.26.080 states that it shall not be permissible for the repeated making or cause of any noise in violation with standards set in Section 8.32.030 which disturbs the peace and quiet of the neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitivity residing in the area.

Chapter 15.58 Real Estate Transfer Disclosure Regarding Airport Noise

Chapter 15.58 of the Municipal Code requires that, in connection with sales of residential dwellings, it must be disclosed which properties are located within the 65 CNEL aircraft noise footprint. Additionally, if the subject property was constructed after 1993 or is reconstructed or renovated, it must be insulated against aircraft noise in accordance with FAA noise insulation program standards.

City of South San Francisco Zoning Ordinance

The South San Francisco Zoning Ordinance contains noise regulations for various land uses within the City. The following revised chapter of the Zoning Ordinance, included as part of the proposed project, assists in reducing or avoiding impacts related to noise and vibration.

Chapter 20.300 Lot and Development Standards (revised)

Section 20.300.009 (Performance Standards) (revised) establishes general standards related to noise and vibration.

D. Location of Measurement for Determining Compliance. Measurements necessary for determining compliance with the standards of this chapter shall be taken at the lot line of the

establishment or use that is the source of a potentially objectionable condition, hazard, or nuisance.

1. Noise Limits. No use or activity shall create ambient noise levels that exceed the standards established in Chapter 8.32 ("Noise Regulation") of the South San Francisco Municipal Code.
2. Noise
   a. Noise Limits. No use or activity shall create ambient noise levels that exceed the standards established in Chapter 8.32 ("Noise Regulation") of the South San Francisco Municipal Code.
   b. Noise Exposure—Land Use Requirements and Limitations. Table 20.300.009 below describes the requirements and limitations of various land uses within the listed CNEL ranges as measured in decibels (dB).

Table 20.300.009 Noise Exposure–Land Use Requirements and Limitations

Land Use	CNEL Range (dB)	Requirements and Limitations
Residential and other noise-sensitive uses (e.g., schools, hospitals, and churches)	Less than 65	Satisfactory
	65 to 70	Acoustic study and noise attenuation measures required
	Over 70	Not allowed, with the exception of projects deemed appropriate by the City Council, and to the extent necessary, approved through the Local Agency Override process, consistent with Public Utilities Code Ordinance Section 21670 et seq.
Commercial	Less than 70	Satisfactory
	70 to 80	Acoustic study and noise attenuation measures required
	Over 80	Airport-related development only; noise attenuation measures required
Industrial	Less than 75	Satisfactory
	75 to 85	Acoustic study and noise attenuation measures required
	Over 85	Airport-related development only; noise attenuation measures required
Open Spaces	Less than 75	Satisfactory
	Over 75	Avoid uses involving concentrations of people or animals

   c. Noise Attenuation Measures. Noise attenuation measures identified in an acoustic study shall be incorporated into the project to reduce noise impacts to satisfactory levels.

d. Maximum Acceptable Interior Noise Levels. New noise-sensitive uses (e.g., schools, hospitals, churches, and residences) shall incorporate noise attenuation measures to achieve and maintain and interior noise level of CNEL 45 dB.
e. Residential Interior Noise Level Reduction. New dwellings exposed to CNEL above 65 dB shall incorporate the following noise reduction design measures unless alternative designs that achieve and maintain an interior noise level of CNEL 45 dB are incorporated and verified by a Board Certified Acoustical Engineer.
f. All façades must be constructed with substantial weight and insulation.
g. Sound-rated windows providing noise reduction performance similar to that of the façade must be included for habitable rooms.
h. Sound-rated doors or storm doors providing noise reduction performance similar to that of the façade must be included for all exterior entries.
i. Acoustic baffling of vents is required for chimneys, fans, and gable ends.
j. Installation of a mechanical ventilation system affording comfort under closed-window conditions.
k. Double-stud construction, double doors, and heavy roofs with ceilings of two layers of gypsum board on resilient channels.

3. Vibration. No vibration shall be produced that is transmitted through the ground and is discernible without the aid of instruments by a reasonable person at the lot lines of the site.

a. Vibration Analysis Required. A vibration analysis prepared by a qualified acoustical consultant is required for the following activities:
   i. All construction-related activities located within 100-feet of residential or other sensitive receptors that require the use of pile driving or other construction method that has the potential to produce high vibration levels.
   ii. All new land use development located within 200-feet of existing rail lines.
   iii. Exemptions. Vibrations from temporary construction, demolition, and vehicles that enter and leave the subject lot (e.g., construction equipment, trains, trucks, etc.) are exempt from this standard.
b. Historic Structure Protection.
   i. For any development project that is located within 150 feet of a historic structure and requires either: (1) pile driving within 150 feet; or (2) utilization of mobile construction equipment within 50 feet of the historic structure, the property owner/developer shall retain an acoustical engineer to conduct a vibration analysis for potential impacts from construction-related vibration impacts onto the historic structure. The vibration analysis shall determine the vibration levels created by construction activities at the historic structure, and if necessary, develop mitigation to reduce the vibration levels to within the Caltrans threshold of 0.12 inches per second peak particle velocity (PPV) for historic buildings.
   ii. Require vibration analysis for historic structure protection. Prior to issuance of grading permits for any development project that is located within 150 feet of a historic structure and, if construction activities will require either: (1) pile driving within 150 feet; or (2) utilization of mobile construction equipment within 50 feet of the historic structure, the

property owner/developer shall retain an acoustical engineer to conduct a vibration analysis for potential impacts from construction-related vibration impacts onto the historic structure. The vibration analysis shall determine the vibration levels created by construction activities at the historic structure, and if necessary, develop mitigation to reduce the vibration levels to within Caltrans threshold of 0.12 inches per second PPV for historic buildings.

3.11.4 - Methodology

Impacts related to noise and groundborne vibration resulting from implementation of the proposed project (collectively, the General Plan Update, Zoning Code Amendments, and Climate Action Plan) are discussed below. The information in this section is based, in part, on the South San Francisco General Plan Update, South San Francisco Municipal Code, and 2012 SFO ALUCP.

See also Section 3.8, Hazards and Hazardous Materials, which addresses the exposure of people residing or working in the Planning Area to a safety hazard or excessive noise because of proximity to SFO. See also Section 3.4, Cultural and Tribal Cultural Resources, which identifies historic and culturally-sensitive structures or land uses in the Planning Area.

3.11.5 - Thresholds of Significance

According to the CEQA Guidelines Appendix G Environmental Checklist, noise impacts resulting from the implementation of the proposed project would be considered significant if the project would cause:

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
b. Generation of excessive groundborne vibration or groundborne noise levels?
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

3.11.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the proposed project and provides mitigation measures where appropriate.

Substantial Noise Increase in Excess of Standards

Impact NOI-1:	**The proposed project could generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.**

The proposed project could result in new residential and nonresidential uses within the Planning Area. Additionally, the proposed project may result in other private and public improvements throughout the City that have the potential for environmental effects related to noise (see Chapter 2, Project Description, Sections 2.5.2 and 2.5.6). The General Plan Update includes policies that require preparation of acoustical studies for residential development where the existing noise levels exceed an exterior noise level of 65 dBA CNEL. Additionally, General Plan Update policies require that new office and commercial development be designed to reduce interior noise levels. Individual development projects would be required to demonstrate compliance with these standards during the design review process. The applicable chapters of the Municipal Code and Zoning Ordinance, including the revised chapters of the Zoning Ordinance that are part of the proposed project, reiterate compliance with the noise performance thresholds identified in the Municipal Code. There are no actions identified in the Climate Action Plan related to noise.

Construction activity can temporarily increase noise, while traffic and stationary noise sources related to future development projects can result in permanent noise increase. Potential temporary and permanent noise increase impacts from construction and operation of the proposed project are analyzed below.

Temporary Construction Noise Increases

A significant impact would occur if noise producing construction activities from the proposed project exceed noise performance standards during certain hours depending on land use as permissible by the City's Municipal Code listed below.

- Residential: 60 dBA L_{max} between 7:00 a.m. and 10:00 p.m. and 50 dBA L_{max} between the hours of 10:00 p.m. and 7:00 a.m.
- Commercial: 60 dBA L_{max} between 7:00 a.m. and 10:00 p.m. and 55 dBA L_{max} between the hours of 10:00 p.m. and 7:00 a.m.
- Gateway and Oyster Point Marina: 65 dBA L_{max} between 7:00 a.m. and 10:00 p.m. and 60 dBA L_{max} between the hours of 10:00 p.m. and 7:00 a.m.

An exception to these standards may only be granted if an application for construction-related exception is made to and considered by the City Manager or the manager's designee in accordance with Section 8.32.060 of the Municipal Code.

For future development projects, including other private and public improvements, noise impacts from construction activities would be a function of the noise generated by construction equipment, equipment location, sensitivity, of nearby land uses, and the timing and duration of the construction activities. Since there are no specific development proposals associated with the adoption of the proposed project, determining exact noise levels, locations, or time periods for construction of such projects is speculative. However, sites adjacent to areas where future development/redevelopment is anticipated to occur could expose people to construction noise throughout the construction period. Construction is performed in discrete steps, each of which has its own mix of equipment, and consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on-site. Thus, the noise levels vary as construction progresses.

Despite the variety in the types and sizes of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction noise ranges to be categorized by work phase.

The site preparation phase, which includes excavation and grading activities, generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery and compacting equipment, such as bulldozers, draglines, backhoes, front loaders, roller compactors, scrapers, and graders. Typical noise levels of construction equipment as measured at a distance of 50 feet from the operating equipment are shown in Table 3.11-2. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 or 4 minutes at lower power settings. Operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 or 4 minutes at lower power settings.

The City has not adopted numeric thresholds of significance for construction noise. Construction noise is typically considered temporary in nature, intermittent, and a normal part of living in a developed, urban area. However, the City has adopted mandatory requirements in the South San Francisco Municipal Code and General Plan Update that will ensure that construction noise associated with General Plan implementation remains less than significant. Municipal Code Section 8.32.050 regulates the time when construction activities may occur, limiting such activities to the period between 8:00 a.m. and 8:00 p.m. on weekdays, on Saturdays between the hours of 9:00 a.m. and 8:00 p.m., and on Sundays and holidays between the hours of 10:00 a.m. and 6:00 p.m. or when authorized by a permit. According to Section 8.32.060 of the Municipal Code, an exception may be granted to these hours only if an application for construction-related exception is made to and considered by the City Manager or the City Manager's designee. Section 8.32.050 of the Municipal Code is applied to all construction permits and compliance is mandatory and is monitored by City grading and building department personnel and is also monitored and addressed through reporting by members of the public when construction hours are not being observed. Furthermore, Policy 1-2 of the Noise Element requires enforcement of the City's Noise Ordinance noise performance standards. In addition, the Actions of Policy 1-2 include the requirement to restrict construction activities to acceptable time periods and to consider constructing temporary sound walls surrounding construction sites during construction. This ensures that construction noise will not occur to a level past what is stipulated in the Municipal Code when residents are most vulnerable to noise disturbance.

This analysis identifies the worst-case loudest phase of construction and identifies the compliance requirements that would reduce this worst-case impact to less than significant. Therefore, other phases of construction that would produce lower noise levels would similarly be reduced to less than significant with the same compliance requirements.

Therefore, compliance with mandatory requirements of the Municipal Code and General Plan Update will ensure that construction noise occurs only at appropriate times of day and is minimized to acceptable levels. Therefore, construction noise impacts would be less than significant.

Permanent Traffic Noise Increases

A significant impact would occur if traffic generated by the proposed project would result in a substantial increase in ambient noise levels compared with those that would exist without the proposed project. The County does not define "substantial increase," therefore for purpose of this analysis, a substantial increase is based on the following criteria. A characteristic of noise is that audible increases in noise levels generally refer to a change of 3 dBA or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. A change of 5 dBA is considered the minimum readily perceptible change to the human ear in outdoor environments. Therefore, for purposes of this analysis, a significant impact would occur if the proposed project would cause the CNEL to increase by any of the following:

- 5 dBA or more even if the CNEL would remain below normally acceptable levels for a receiving land use.
- 3 dBA or more, thereby causing the CNEL in the vicinity of the proposed project to exceed normally acceptable levels and result in noise levels that would be considered conditionally acceptable for a receiving land use.
- 1.5 dBA or more where the CNEL currently exceeds conditionally acceptable levels.

As identified in Table 3.11-7, noise environments with noise levels of up to 65 dBA CNEL are considered normally acceptable for residential land use developments, r industrial and commercial land use development, and for open land use areas and schools.

The FHWA highway traffic noise prediction model (FHWA-RD-77-108) was used to evaluate existing and future traffic noise conditions with implementation of the proposed project along modeled roadway segments in the vicinity of the Planning Area. Traffic modeling was performed using the data provided by Fehr & Peers. The resultant noise levels were weighed and summed over a 24-hour period to determine the CNEL values. It should be noted that roadway segments that are designated as truck routes or major arterials within the City we modeled to account for the higher volume of heavy duty truck trips that travel along these roadways. The traffic noise modeling input and output files—including the 60 dBA, 65 dBA, and 70 dBA CNEL noise contour distances—are included in Appendix G. Table 3.11-8 shows a summary of the traffic noise levels for year 2040 projected traffic conditions without and with the proposed project, as measured at 50 feet from the centerline of the outermost travel lane.

Table 3.11-8: Year 2040 Traffic Noise Levels Without and With the Proposed Project

Roadway Segment	Without Proposed Project		With Proposed Project		Increase Over Without Proposed Project Conditions (dBA)
	ADT	CNEL (dBA)*	ADT	CNEL (dBA)*	
I-280–north of Westborough Boulevard	191,300	86.5	196,500	86.6	0.1
I-280–Westborough Boulevard to Sneath Lane	203,900	86.8	225,300	87.2	0.4

Roadway Segment	Without Proposed Project		With Proposed Project		Increase Over Without Proposed Project Conditions (dBA)
	ADT	CNEL (dBA)*	ADT	CNEL (dBA)*	
I-380–I-280 to US-101	102,200	83.8	108,900	84.1	0.3
US 101–I-380 to Oyster Point Boulevard	192,500	86.0	205,300	86.3	0.3
Hillside Boulevard–Lawndale Boulevard to Chestnut Avenue	24,100	70.5	26,200	70.8	0.3
Hillside Boulevard–Chestnut Avenue to Sister Cities Boulevard	24,400	70.1	26,300	70.4	0.3
Hillside Boulevard–Sister Cities Boulevard to School Street	8,500	65.9	6,300	64.6	-1.3
Sister Cities Boulevard–Hillside Boulevard to San Francisco Drive	23,300	69.9	22,400	69.7	-0.2
Sister Cities Boulevard–San Francisco Drive to Airport Boulevard	25,700	70.3	22,800	69.8	-0.5
El Camino Real–north of Hickey Boulevard	22,500	70.2	23,800	70.4	0.2
El Camino Real–Hickey Boulevard to McLellan Drive	41,900	71.1	38,900	70.8	-0.3
El Camino Real–McLellan Drive to Arroyo Drive	33,400	70.2	36,100	70.5	0.3
El Camino Real–Arroyo Drive to Westborough Boulevard	30,500	69.0	34,300	69.5	0.5
El Camino Real–Westborough Boulevard to West Orange Avenue	45,400	70.8	43,700	70.6	-0.2
El Camino Real–West Orange Avenue to South Spruce Avenue	43,000	72.2	45,000	72.4	0.2
El Camino Real–South Spruce Avenue to Noor Avenue	42,300	70.5	42,800	70.5	0.0
El Camino Real–Noor Avenue to Sneath Lane	41,800	71.1	39,700	70.9	-0.2
El Camino Real–Sneath Lane to I-380	46,700	71.6	48,500	71.8	0.2
Grand Avenue–Willow Avenue to Chestnut Avenue	11,300	61.3	15,000	62.5	1.2
Grand Avenue–Chestnut Avenue to Eucalyptus Avenue	11,300	61.3	12,500	61.7	0.4
Grand Avenue–Eucalyptus Avenue to Orange Avenue	10,300	60.9	9,600	60.5	-0.4
Grand Avenue–Orange Avenue to Magnolia Avenue	9,600	60.5	9,900	60.7	0.2
Grand Avenue–Magnolia Avenue to Spruce Avenue	9,000	60.3	9,600	60.5	0.2

Roadway Segment	Without Proposed Project		With Proposed Project		Increase Over Without Proposed Project Conditions (dBA)
	ADT	CNEL (dBA)*	ADT	CNEL (dBA)*	
Grand Avenue–Spruce Avenue to Maple Avenue	8,400	60.0	9,100	60.3	0.3
Grand Avenue–Maple Avenue to Linden Avenue	8,900	60.2	10,300	60.9	0.7
Grand Avenue–Linden Avenue to Airport Boulevard	8,900	60.2	13,200	61.9	1.7
Westborough Boulevard–Callan Drive to Galway Place	24,900	68.9	28,300	69.4	0.5
Westborough Boulevard–Galway Place to I-280	30,800	69.8	31,900	70.0	0.2
Westborough Boulevard–I-280 to El Camino Real	32,100	72.9	25,700	71.9	-1.0
Chestnut Avenue–El Camino Real to Mission Road	32,700	70.1	24,800	68.9	-1.2
Chestnut Avenue–Mission Road to Commercial Avenue	25,800	68.5	24,800	68.3	-0.2
Chestnut Avenue–Commercial Avenue to Grand Avenue	8,600	64.3	11,800	65.7	1.4
Chestnut Avenue–Grand Avenue to Hillside Boulevard	9,100	64.5	9,300	64.6	0.1
South Spruce Avenue–El Camino Real to Huntington Avenue	19,600	64.0	21,000	64.3	0.3
South Spruce Avenue–Huntington Avenue to Myrtle Avenue	19,800	64.0	18,100	63.7	-0.3
South Spruce Avenue–Myrtle Avenue to North Canal Street	13,900	62.5	14,500	62.7	0.2
South Spruce Avenue–North Canal Street to Railroad Avenue	13,600	62.8	10,800	61.8	-1.0
South Spruce Avenue–Railroad Avenue to Grand Avenue	8,000	59.8	7,900	59.7	-0.1
South Spruce Avenue–Grand Avenue to Hillside Boulevard	4,500	57.3	3,300	55.9	-1.4

Notes:
ADT = Average Daily Traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
*As measured at 50-feet from the centerline of the outermost travel lane.
Source: FirstCarbon Solutions (FCS) 2022.

Several of the modeled roadway segments would experience a reduction in traffic noise levels with implementation of the proposed project, compared to conditions that would exist without the proposed project, due to lower anticipated average daily trips generated by the proposed land uses compared to the total development that could occur under the existing General Plan.

The highest increase that would occur along these modeled roadway segments would occur along Grand Avenue from Linden Avenue to Airport Boulevard. The Plus Proposed Project conditions would result in calculated traffic noise levels of 61.9 dBA CNEL as measured at 50-feet from the centerline of the nearest travel lane. This would result in a 1.7 dBA increase in traffic noise levels compared to noise levels that are calculated would exist under buildout conditions without the proposed project. These resulting noise levels are considered “normally acceptable” for all land use types. Therefore, according to the significance impact criteria identified above, a 5 dBA increase would be considered significant for these conditions. Since the increase would only be 1.7 dBA, this impact would be considered less than significant, and no mitigation would be required.

Although this analysis evaluates buildout of the proposed project against baseline conditions, the development contemplated by the without proposed project conditions is already allowed under the existing General Plan. Accordingly, development consistent with the existing General Plan would potentially occur absent the adoption of the General Plan Update currently under review. While development envisioned by the proposed project would result in an incremental increase in development in the Planning Area, future development would be required to comply with requirements of the General Plan Update and City of South San Francisco Municipal Code protecting against noise impacts. Specifically, Policy 1-1 requires that all new development within the City complies with the Land Use/Noise Compatibility guidelines, along with associated Actions that require projects must be assessed through the subdivision, site plan, conditional use permit, and other development review processes, and that such projects must incorporate conditions of approval and mitigation measures that ensure noise compatibility where appropriate. In addition, Section 20.300.009 (Performance Standards) (revised) of the Zoning Ordinance also establishes land use development requirements and limitations, as well as acoustic design requirements for development in noise impacted areas. There are no actions identified in the Climate Action Plan related to noise. Therefore, traffic noise impacts associated with the proposed project would be less than significant.

Permanent Stationary Source Noise Increases

A significant impact would occur if operational noise levels generated by stationary noise sources at development projects under the proposed project exceed the following noise performance standards:

- **Residential:** 60 dBA L_{max} between 7:00 a.m. and 10:00 p.m. and 50 dBA L_{max} between the hours of 10:00 p.m. and 7:00 a.m.
- **Light Industrial:** 60 dBA L_{max} between 7:00 a.m. and 10:00 p.m. and 55 dBA L_{max} between the hours of 10:00 p.m. and 7:00 a.m.
- **Business Park:** 65 dBA L_{max} between 7:00 a.m. and 10:00 p.m. and 60 dBA L_{max} between the hours of 10:00 p.m. and 7:00 a.m.

Future development projects under the proposed project would include new stationary noise sources such as parking lot activities, and mechanical ventilation system equipment. These would be potential point sources of noise that could affect noise-sensitive receptors in the vicinity of the proposed project.

Parking Lot and Truck Loading/Unloading Activities

Typical parking lot activities include people conversing, doors shutting, and vehicles idling which generate noise levels ranging from approximately 60 dBA to 70 dBA L_{max} at 50 feet. Noise levels from typical rooftop unit mechanical ventilation equipment range from 50 dBA to 60 dBA L_{eq} at a distance of 25 feet. Typical maximum noise levels from truck loading and unloading activity are 70 dBA to 80 dBA L_{max} as measured at 50 feet.

These stationary source operational noise levels could exceed the City's noise performance thresholds if they were to occur in areas adjacent to sensitive receptor land uses. Therefore, mitigation would be required to reduce this potential impact. Parking activity noise can be mitigated either at the source or at the receiving land use using setbacks, block walls, acoustic-rated windows, or by siting parking areas on sides of buildings opposite sensitive receptors (using buildings as shielding). For example, at a distance of 300 feet, unobstructed parking lot activity noise levels would attenuate to below 55 dBA L_{max}; while properly sited structural (building or sound wall) shielding can provide a minimum of 15 dBA reduction.

Therefore, with implementation of Mitigation Measure (MM) NOI-1, which requires preparation of a noise study to identify appropriate design measures, where required, to reduce the potential effect of parking lot noise, impacts generated by future development projects under the proposed project would be reduced to less than significant with mitigation incorporated.

Mechanical Equipment Operations

Noise levels from commercially available mechanical ventilation equipment range from 50 dBA to 60 dBA L_{eq} at a distance of 25 feet. These stationary source operational noise levels could exceed the City's thresholds if they were to occur in areas adjacent to sensitive receptor land uses. Therefore, mitigation would be required to reduce this potential impact. Mechanical equipment operational noise can be mitigated either at the source or at the receiving land use using setbacks, shielding, acoustic-rated windows, or by locating such equipment on rooftops or sides of buildings opposite sensitive receptors (using buildings as shielding). For example, at a distance of 50-feet, unobstructed mechanical ventilation equipment operational noise levels would attenuate to below 55 dBA L_{max}; while properly sited structural (building or sound wall) shielding can provide an expected 12 dBA to 20 dBA reduction.

Therefore, with implementation of MM NOI-1, which requires preparation of a noise study to identify appropriate design measures, where required, to reduce the potential effect of mechanical ventilation noise, impacts generated by future development projects under the proposed project would be reduced to less than significant with mitigation incorporated.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM NOI-1 Operational Noise Reduction Plan

Prior to issuance of building permits, the project applicant or sponsor shall implement the following measures to limit on-site operational stationary noise source impacts:

- Any proposed development projects that include parking areas, terminals, or loading docks of commercial or industrial land uses within 300-feet of a residential receptor shall demonstrate compliance with Policies NOI-1.1 and NOI-1.2 of the City's Noise Element by submitting a final acoustical report prepared to the satisfaction of the Planning Division that identifies design measures to adequately minimize the potential noise impacts of vehicles on the site to adjacent land uses. The report must be approved by the Planning Division prior to issuance of building permits.
- For any future development project that would include exterior mechanical systems (such as mechanical ventilation systems) within 50 feet of a residential receptor, the project applicant or sponsor shall submit a final acoustical report prepared to the satisfaction of the Planning Division that demonstrates compliance of the project with Policies NOI-1.1 and NOI-1.2 of the City's Noise Element. Noise reduction design features may include, but are not limited to, locating stationary noise sources on the site to be shielded by structures (buildings, enclosures, or sound walls) or by using equipment that has a quieter rating. The report must be approved by the Planning Division prior to issuance of building permits.

Level of Significance After Mitigation

Less than significant impact.

Groundborne Vibration/Noise Levels

Impact NOI-2: The proposed project could result in generation of excessive groundborne vibration or groundborne noise levels.

The effects of groundborne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Construction activities and the operation of heavy trucks, buses, and trains can produce vibration that may be felt by adjacent uses. New development under the proposed project would result in additional residential and nonresidential development, as well as other private and public improvements, throughout the Planning Area. The short-term and long-term groundborne vibration impacts associated with construction and operations are discussed separately below.

Construction-Related Vibration

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of a construction site respond to these vibrations with varying results ranging from no perceptible effects at the low levels, to slight damage at the highest levels. Table 3.11-3 provides approximate vibration levels for specific types of construction equipment and activities.

Of the variety of equipment used during construction, impact pile drivers that could be used in the site preparation phase of construction would produce the greatest groundborne vibration levels. Impact pile drivers produce groundborne vibration levels ranging up to 0.644 inch per second (in/sec) PPV at 25 feet from the operating equipment.

Construction vibration levels from future development projects under the proposed project, including other private and public improvements, could exceed the FTA damage threshold criteria of 0.12 in/sec PPV. Construction vibration sources can be mitigated to acceptable levels either at the source or on the adjacent property using alternate equipment, adequate setbacks, or by digging temporary trenches between the source and the receptor. For example, at a distance of 200 feet, vibration levels from an impact pile driver would attenuate to 0.02 in/sec PPV.

Mandatory requirements in the General Plan Update will ensure that construction vibration impacts associated with future development projects under the proposed project remains less than significant. Policy NOI-2.1 requires a vibration impact analysis for any construction activities, located within 100-feet of residential or sensitive receptors that require the use of pile driving or other construction methods that have the potential to produce high groundborne vibration levels. Policy NOI-3.1 requires vibration impact analysis for historic structure protection for construction activities within 150 feet of historic structures. Compliance with these standards is also reiterated in Section 20.300.009 (Performance Standards) (revised) of the Zoning Ordinance. For identify potential impacts, these required site-specific analyses would identify measures such as setback requirement, use of alternate construction methods, or pre-emptive trenching to interrupt groundborne vibration transmission.

These policies are applied to all construction permits and compliance is mandatory and is monitored by City grading and building department personnel. This ensures that construction groundborne vibration impacts will not occur to a level that exceeds the General Plan Update policies' established construction vibration impact thresholds.

Therefore, compliance with mandatory requirements of the General Plan Update will ensure that construction groundborne vibration impacts are reduced to acceptable levels. Therefore, construction groundborne vibration impacts would be less than significant.

Operation-Related Vibration

The primary source of groundborne vibration generated within the boundaries of South San Francisco is rail activity from BART and the Southern Pacific Railroad line. Based on the FTA Guidelines, the screening distance for conventional railroad activity is 200 feet for residences and

other buildings where people sleep. Therefore, groundborne vibration from rail activity could result in levels of annoyance or disturbance for residential type land uses located within 200 feet of existing rail lines within the City. However, it should be noted that BART remains underground throughout South San Francisco; therefore, based on the depth of the rail line, BART-related groundborne noise and vibration impacts would be less than significant.

Mandatory requirements in the General Plan Update will ensure that railroad related vibration impacts associated with future development projects under the proposed project remains less than significant. Policy NOI-2.2 requires that a vibration impact analysis be prepared for new land use developments located within 200 feet of an existing rail line. Therefore, compliance with mandatory requirements of the General Plan Update will ensure that railroad groundborne vibration impacts are minimized to acceptable levels. Therefore, railroad groundborne vibration impacts would be less than significant.

Level of Significance

Less than significant impact.

Excessive Noise Levels from Airport Activity

Impact NOI-3:	**The proposed project could expose people residing or working in the plan area to excessive noise levels for a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport.**

The City of South San Francisco experiences air traffic noise impacts due to its proximity to SFO. Aircraft noise in the City results from aircraft departing from Runway 28 and, to a lesser degree, southbound flights departing from Runway 1. According to the San Francisco International Airport Master Plan Draft EIR, Runways 28 and 1 accommodate approximately 95 percent of departures from the airport. Flights departing from Runway 28 climb directly over noise-sensitive land uses at altitudes between several hundred feet and 2,000 feet, resulting in high pass by noise levels in residential areas, including areas outside the contours that define noise impacted areas. International flights bound for Pacific Rim destinations use Runway 28 exclusively, using large aircraft such as B-747s, which are heavily laden and climb slowly over the noise-sensitive uses located below its flight path. A primary determinant of aircraft noise level is the aircraft classification.

The proposed project does not propose additional special events or sources of single-event noise in the form of aircraft flyover noise. Therefore, the proposed project would not result in changes in the 65 dBA CNEL airport noise contours and would not increase airport noise impacts.

However, future development could introduce noise-sensitive land uses to excessive aircraft noise levels if they would occur within the 65 dBA CNEL contours of the airport. Any local plans, policy actions or development activities that affect areas within the 65 dBA CNEL contour established in the SFO ALUCP must receive San Mateo County ALUC approval or have a finding of overriding consideration prior to local permit issuance. The ALUC determines the 65 dBA CNEL boundary by examining both federal and State noise impact boundaries. To assist this process, the ALUC has established noise/land use compatibility standards as the basis of plan review which include

easement requirements for development located in conditionally compatibles areas and identify the compatibility determinations of various residential uses. These standards and related policies are summarized in the regulatory framework discussion above. For example, Policy NP-4 identifies that residential uses are not compatible in areas exposed to noise above 70 dBA CNEL and typically should not be allowed in these high noise areas.

The proposed project envisions future development that could occur within the 65 dBA CNEL noise contours which could expose persons residing or working at these areas to noise levels from airport activity that would be in excess of normally acceptable land use compatibility standards. For example, the proposed project includes planned mixed-use residential areas east of US-101 which would lie within the airport's runway safety zone boundaries and the SFO 65 dBA CNEL noise contours shown on Exhibit 3.11-2.

These airport activity noise levels could exceed the City's noise/land use compatibility standards for certain land uses. Therefore, mitigation would be required to reduce this potential impact. Airport activity noise can be mitigated at the receiving land use using acoustic-rated wall and window assemblies. For example, a combined wall assembly with a Sound Transmission Class (STC) rating of 30-STC can provide an expected 30 dBA exterior to interior reduction in noise levels. With such an assembly, exterior noise levels of 70 dBA CNEL would be reduced to approximately 40 dBA CNEL.

Therefore, with implementation of MM NOI-2, which requires preparation of a noise study to identify appropriate design measures, where required, to reduce the potential effect of airport activity noise, impacts generated by future development projects under the proposed project would be reduced to less than significant with mitigation incorporated.

See also Section 3.8, Hazards and Hazardous Materials, which addresses the exposure of people residing or working in the Planning Area to a safety hazard or excessive noise because of proximity to SFO.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM NOI-3 Airport Noise Impact Reduction Plan

Prior to issuance of building permits, the project applicant or sponsor of proposed development projects shall implement the following measures to limit airport activity noise source impacts:

- Any proposed residential development project or any hotel, motel, or transient lodging land use development project, that would be located within the San Francisco International Airport (SFO) 65 A-weighted decibel (dBA) Community Noise Equivalent Level (CNEL) noise contours, shall demonstrate compliance with Policies NOI-1.1 and NOI-1.2 of the City's Noise Element by submitting a final acoustical report prepared to the satisfaction of the Planning Division that identifies design measures to adequately minimize airport activity noise levels to

meet the interior noise level standards shown in Table 11 of the Noise Element. Outdoor active use space must also comply with the exterior noise standards of Table 11 of the Noise Element or must be excluded from such projects. The report must be approved by the Planning Division prior to issuance of building permits.

- Any proposed commercial development project that would be located within the SFO 70 dBA CNEL noise contours shall demonstrate compliance with Policies NOI-1.1 and NOI-1.2 of the City's Noise Element by submitting a final acoustical report prepared to the satisfaction of the Planning Division that identifies design measures to adequately minimize airport activity noise levels to meet the interior noise level standards shown in Table 11 of the Noise Element. The report must be approved by the Planning Division prior to issuance of building permits.
- Any proposed institutional or public facility development project that would be located within the SFO 65 dBA CNEL noise contours shall demonstrate compliance with Policies NOI-1.1 and NOI-1.2 of the City's Noise Element by submitting a final acoustical report prepared to the satisfaction of the Planning Division that identifies design measures to adequately minimize airport activity noise levels to meet the interior noise level standards shown in Table 11 of the Noise Element. Outdoor active use space must also comply with the exterior noise standards of Table 11 of the Noise Element or must be excluded from such projects. The report must be approved by the Planning Division prior to issuance of building permits.

Level of Significance After Mitigation

Less than significant impact.

3.11.7 - Cumulative Impacts

The geographic scope of the cumulative impact analysis for Noise is the South San Francisco Planning Area as well as the surrounding cities of Brisbane, Daly City, Pacifica, San Bruno, and Millbrae; however, it is important to note that noise is by definition a localized phenomenon, and reduces in magnitude as the distance from the noise source increases. This analysis evaluates whether the impacts of the proposed project, together with the impacts of cumulative development, would result in a cumulatively significant impact on the noise environment. This analysis then considers whether incremental contribution to cumulative impacts associated with the implementation of the proposed project would be significant. Both conditions must apply for a proposed project's cumulative effects to rise to the level of significance.

Cumulative traffic noise levels would have the highest increase of 1.7 dBA, compared to existing traffic noise levels, along the segment of Grand Avenue from Linden Avenue to Airport Boulevard. The noise levels resulting from future development under the proposed project would be 61.9 dBA CNEL along this segment of Grand Avenue. These traffic noise levels are considered normally acceptable for all types of land uses. Therefore, this increase is not considered a cumulative impact. As shown in Table 3.11-8 above, for every modeled roadway segment that would result in traffic

noise levels that would exceed normally acceptable standards for some land uses, the contribution of future development under the proposed project to those impacted roadway segments, is less than a 1 dBA increase or even a decrease in noise levels compared to noise levels that would exist without the proposed project. Therefore, development under the proposed project would not have an incremental contribution to the less than significant cumulative impact. For the reasons addressed above, including the fact that impacted segments would have a less than 1 dBA increase, traffic related noise levels from the proposed project would not result in a cumulatively considerable contribution to the noise environment in the vicinity of the proposed project.

With regard to stationary source noise impacts, cumulative development would be required to comply with existing planning regulations regarding noise. Accordingly, cumulative impacts would be less than significant. In addition, as shown in the analysis above, implementation of MM NOI-1, Operational Noise Reduction Plan, would reduce stationary source noise impacts from future development under the proposed project to less than significant and would not result in any substantial permanent increase in ambient noise levels. Therefore, stationary source noise levels from implementation of the proposed project would not result in a cumulatively considerable contribution to the environment in the vicinity of the proposed project.

With regard to groundborne vibration impacts, the major sources within the Planning Area are temporary construction and ongoing railroad activity. Groundborne vibration generated by construction equipment and railroad activities spreads through the ground and diminishes greatly in magnitude with increases in distance. These sources do not constitute an existing cumulative impact. Furthermore, development under the proposed project would be required to comply with the mandatory requirements in the General Plan Update that would ensure that construction and operational groundborne vibration impacts associated with future development under the proposed project remains less than significant. Therefore, there is no cumulative groundborne vibration impact, and groundborne vibration levels from implementation of the proposed project would not result in a cumulatively considerable contribution to this less than significant cumulative impact.

With regard to airport activity noise impacts, the combined effects of cumulative projects (other cities) surrounding South San Francisco would not result in any additional special events or sources of single-event noise in the form of aircraft flyover noise, and therefore, would not result in changes in the 65 dBA CNEL airport noise contours and would not increase airport noise impacts. However, future buildout cumulative conditions related to airport activity related noise would be the same as that identified in Impact NOI-3 discussion above. The proposed project could still result in the introduction of land use development that could be potentially incompatible with the noise environment in the vicinity of SFO. However, as discussed in Impact NOI-3, implementation of MM NOI-2, Airport Noise Impact Reduction Plan, would reduce airport activity noise impacts from implementation of the proposed project to less than significant. Therefore, with implementation of MM NOI-2, airport activity noise levels from implementation of the proposed project would not result in a cumulatively considerable contribution to this less than significant cumulative impact. Therefore, the proposed project's contribution to cumulative impacts would be less than significant.

Level of Cumulative Significance

Less than significant impact.

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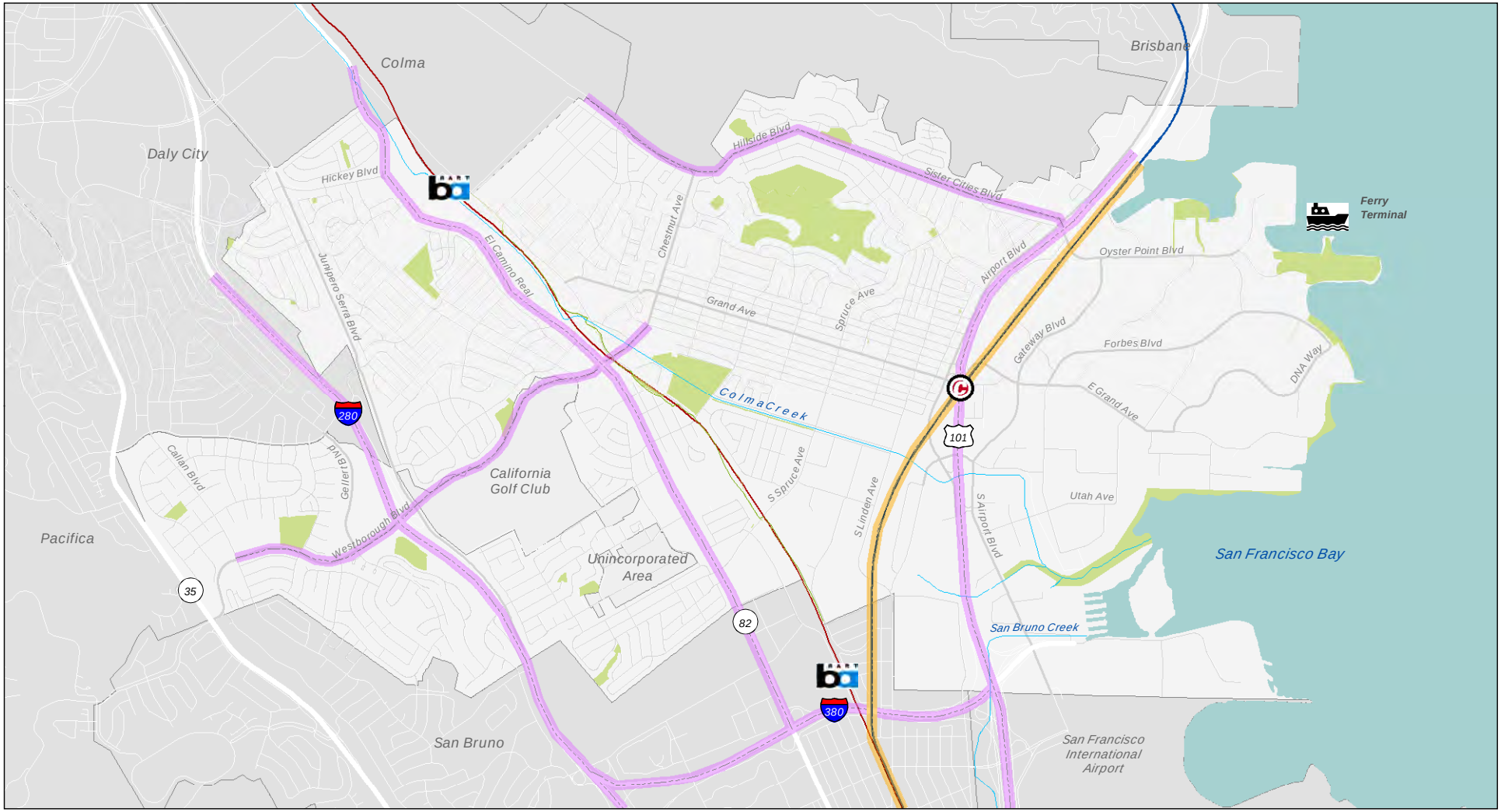

Source: Raimi + Associates, July 2019.

Jurisdictional Boundary

- City of South San Francisco
- Other City Boundaries
- Sphere of Influence

Transportation Features

- BART
- Caltrain
- Highway
- Arterial
- Local Street
- Railroad Segments with Noise Levels above 65 dBA CNEL*
- Roadway Segments with Noise Levels above 65 dBA CNEL*

* (measured at 50-feet from the nearest travel lane/line)

FIRSTCARBON SOLUTIONS™

3,400 1,700 0 3,400 Feet

Exhibit 3.11-1
Roadway and Railroad Noise Exposure Map

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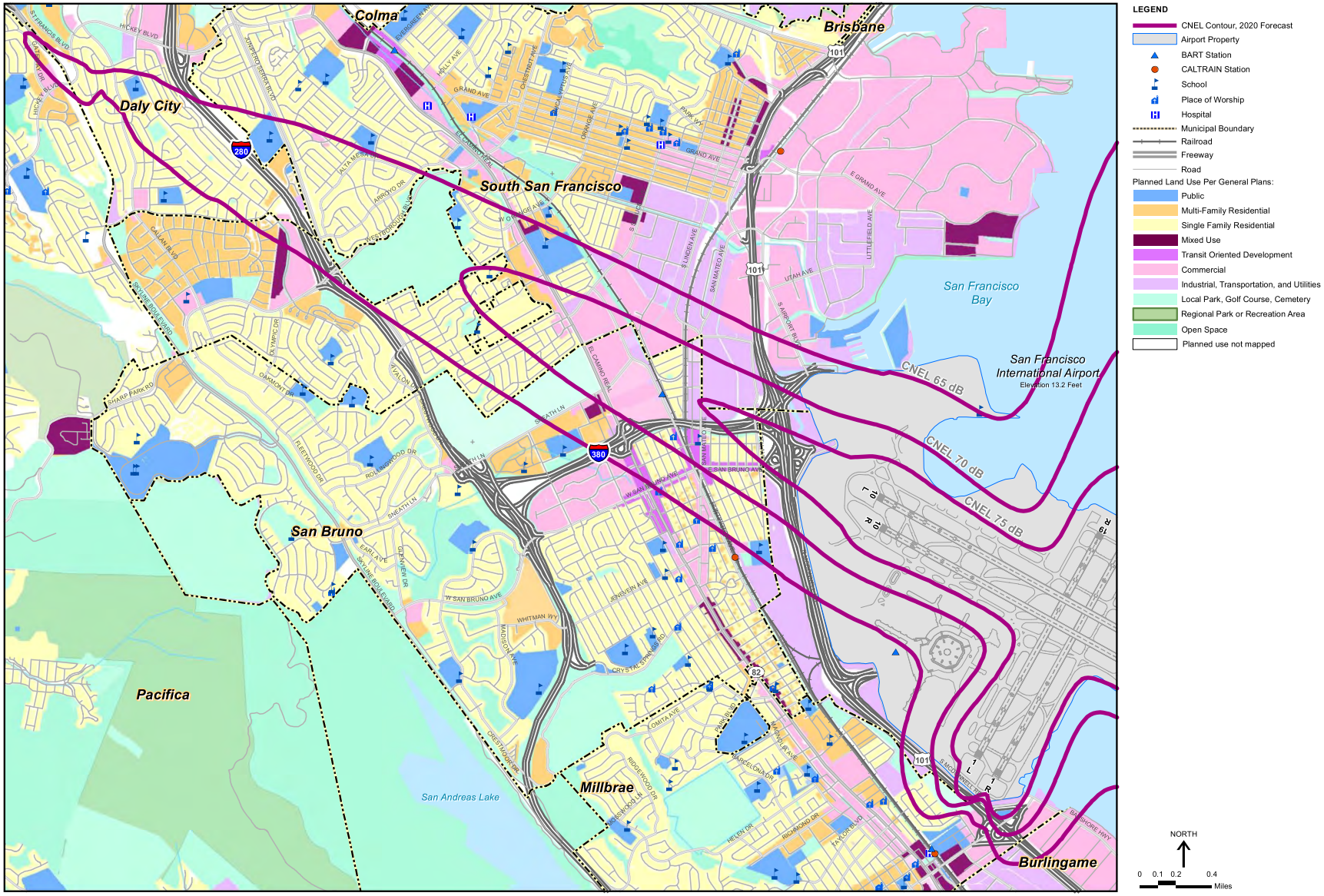

Source: City/County Association of Governments of San Mateo County, 2012. Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. November.

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Exhibit 3.11-2
San Francisco International Airport Noise Contours

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3.12 - Population, Housing, and Employment

This section of the Draft Program Environmental Impact Report (Draft Program EIR) addresses potential environmental effects related to population and housing within the South San Francisco General Plan Update Planning Area (Planning Area) resulting from implementation of the General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project). Future discretionary projects facilitated by the proposed project will be evaluated for project-specific impacts related to population and housing at the time they are proposed.

The following comments related to Population, Housing, and Employment were received in response to the Notice of Preparation (NOP). The comment letters are included in Appendix A.

- Requests that the General Plan Update include additional affordable housing.

The descriptions and analysis in this section are based, in part, on statements, data, and figures provided by the following reference materials:

- South San Francisco General Plan Update.
- South San Francisco Municipal Code.
- E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change—January 1, 2020 and 2021, California Department of Finance, May 2021.
- E-4 Population Estimates for Cities, Counties, and the State, January 2001-2010, with 2000 and 2010 Census Counts, California Department of Finance. November 2012.
- E-5 Population Estimates for Cities, Counties, and the State, January 2011-2021, with 2010 Benchmark, California Department of Finance, May 2021.
- E-8 Historical Population and Housing Estimates for Cities, Counties, and the State, 2000-2010, California Department of Finance, November 2012.
- Association of Bay Area Governments (ABAG). 2021. Regional Housing Needs Allocation (RHNA) Plan, San Francisco Bay Area, 2023-2031. December.
- California Employment Development Department (EDD), California Labor Market Information.

3.12.1 - Existing Conditions

Population

The City of South San Francisco is one of 20 cities in the County of San Mateo and was estimated to have a population of 67,135 in 2021 by the California Department of Finance. Table 3.12-1 compares the City's population growth trends with the County's population growth trends from 2000 to 2021. The population of South San Francisco grew from 60,552 in 2000 to 67,730 in 2020 and declined slightly to 67,135 in 2021. Overall, City population growth between 2000 and 2021 represented a 10.8 percent increase. County population grew from 707,163 in 2000 to 771,061 in 2020 and

declined slightly in 2021 to 765,245. Overall, County population growth between 2000 and 2021 represented an 8.2 percent increase.[1,2]

Table 3.12-1: Population Characteristics 2000-2021

Jurisdiction	2000	2010	2020	2021	2000-2021 Change
City of South San Francisco	60,552	63,632	67,730	67,135	10.8%
San Mateo County	707,163	718,451	771,061	765,245	8.2%
City of South San Francisco Share of County	8.6%	8.9%	8.8%	8.8%	–

Source:
California Department of Finance. 2021. E-5 Population Estimates for Cities, Counties, and the State, January 2011-2021, with 2010 Benchmark. May.
California Department of Finance. 2012. E-4 Population Estimates for Cities, Counties, and the State, January 2001-2010, with 2000 and 2010 Census Counts. November.

Population Projections

As shown in Table 3.12-2, ABAG predicts that South San Francisco's growth rates will slow in the coming decades. The County's growth rate is expected to be variable.

Table 3.12-2: Population Projections

Jurisdiction	2025	2030	2035	2040
City of South San Francisco	71,080	76,950	78,615	80,015
San Mateo County	816,460	853,260	878,020	916,590
Numerical Change	**–**	**2025-2030**	**2030-2035**	**2035-2040**
City of South San Francisco	–	5,870	1,665	1,400
San Mateo County	–	36,800	24,760	38,570
Percent Change	**–**	**2025-2030**	**2030-2035**	**2035-2040**
City of South San Francisco	–	8.3%	2.2%	1.8%
San Mateo County	–	4.5%	2.9%	4.4%

Source: Association of Bay Area Governments (ABAG). 2017 Projections 2040 by Jurisdiction.

[1] California Department of Finance. 2021. E-5 Population Estimates for Cities, Counties, and the State, January 2011-2021, with 2010 Benchmark. May.
[2] California Department of Finance. 2012. E-4 Population Estimates for Cities, Counties, and the State, January 2001-2010, with 2000 and 2010 Census Counts. November.

Housing

South San Francisco has an expensive housing market due to the area's proximity to San Francisco and location within the greater Bay Area. Total housing units and household size for the City are described below.

The U.S. Census Bureau defines a "household" as all persons living in a single housing unit, whether or not they are related. One person living alone is considered a household, as is a group of unrelated people living in a single housing unit. The U.S. Census Bureau defines "family" as related persons living within a single housing unit.[3]

Housing Units

Table 3.12-3 shows growth in housing units in the City of South San Francisco and San Mateo County from 2000 to 2021. The number of housing units in the City grew from 20,138 in 2000 to 22,495 in 2021, a 11.7 percent increase. The County grew from 260,578 housing units in 2000 to 282,299 in 2021, an 8.3 percent increase. During the same period, the City's number of housing units comprised, on average, approximately 8 percent of the County's housing units.

Table 3.12-3: Housing Units 2000-2021

Jurisdiction	2000	2010	2020	2021	2000-2021 Change
City of South San Francisco	20,138	21,814	22,437	22,495	11.7%
San Mateo County	260,578	271,031	280,859	282,299	8.3%
City of South San Francisco Share of County	7.7%	8.1%	8.0%	8.0%	–

Source:
California Department of Finance. 2021. E-5 Population Estimates for Cities, Counties, and the State, January 2011-2021, with 2010 Benchmark. May.
California Department of Finance. 2012. E-4 Population Estimates for Cities, Counties, and the State, January 2001-2010, with 2000 and 2010 Census Counts. November.

Household Size

Table 3.12-4 compares household sizes in the City of South San Francisco and the County from 2000 to 2021. Average household size in the City increased slightly from 3.06 persons/household in 2000 to 3.10 in 2021. Average household size in the County increased from 2.74 persons/household in 2000 to 2.84 in 2021. Overall, the City has maintained a higher average household size than the County over the last 21 years.

[3] United States Census Bureau. 2021. Subject Definitions. August 7. Website: https://www.census.gov/programs-surveys/cps/technical-documentation/subject-definitions.html#household. Accessed April 21, 2022.

Table 3.12-4: Household Size 2000-2021

Jurisdiction	2000	2010	2020	2021
City of South San Francisco	3.06	3.01	3.14	3.10
San Mateo County	2.74	2.75	2.87	2.84

Source:
California Department of Finance. 2021. E-5 Population Estimates for Cities, Counties, and the State, January 2011-2021, with 2010 Benchmark. May.
California Department of Finance. 2012. E-4 Population Estimates for Cities, Counties, and the State, January 2001-2010, with 2000 and 2010 Census Counts. November.

Future Housing Needs

The RHNA process identifies the total number of housing units, separated into four affordability levels, that every local government in the Bay Area must plan to accommodate within an 8-year planning period. The current RHNA cycle applicable to the City is the 2015 to 2023 period. The primary role of the RHNA methodology is to encourage a pattern of housing growth for the Bay Area that meets the needs of all residents. According to the 2015–2023 RHNA Plan, South San Francisco was allocated a total of 1,900 housing units at varying levels of affordability for the period 2015 to 2023 (see Table 3.12-5). As of 2021, the City had entitled about 1,259 housing units since 2015, meeting about 68 percent of its total RHNA requirement. However, about 75 percent of permitted units have been at the above moderate income level, and the City has only met about 43 percent of its moderate income, 23 percent of its very low income, and 20 percent of its low income housing requirements. Additional housing units are in the pipeline, as there are about 3,500 housing units under construction, under review, or entitled in the City. However, even if all 3,500 units are built by 2023, the City may not meet its RHNA requirement if pipeline housing continues to trend in the above moderate income category.

Table 3.12-5: South San Francisco Regional Housing Needs Allocation 2015-2023

Income Category	RHNA Allocation	Percent of RHNA Total	Units Permitted	Percent of Allocation Met
Very Low Income (<50% of Area Median Income)	565	30.3	80	14.2
Low Income (50-80% of Area Median Income)	281	15.1	4	1.4
Moderate Income (80-120% of Area Median Income)	313	16.8	33	10.5
Above Moderate Income (>120% of Area Median Income)	705	37.8	565	80.1
Total	**1,864**	**100.0**	**682**	**36.6**

Source: Association of Bay Area Governments (ABAG). 2013. Regional Housing Needs Allocation (RHNA) Plan, San Francisco Bay Area, 2015-2023. July.

The RHNA process identifies the total number of housing units, separated into four affordability levels, that every local government in the Bay Area must plan to accommodate for the period from 2023 to 2031. The primary role of the RHNA methodology is to encourage a pattern of housing growth for the Bay Area that meets the needs of all residents. According to the 2023–2031 RHNA Plan, South San Francisco has been allocated a total of 3,956 housing units at varying levels of affordability for the period 2023 to 2031 (See Table 3.12-6).

Table 3.12-6: South San Francisco Regional Housing Needs Allocation 2023-2031

Income Category	RHNA Allocation	Percent of RHNA Total
Very Low Income (<50% of Area Median Income)	871	22.0
Low Income (50-80% of Area Median Income)	502	12.7
Moderate Income (80-120% of Area Median Income)	720	18.2
Above Moderate Income (>120% of Area Median Income)	1862	47.1
Total	**3,956**	**100.0**
Source: Association of Bay Area Governments (ABAG). 2021. Regional Housing Needs Allocation (RHNA) Plan, San Francisco Bay Area, 2023-2031. December.		

Employment

South San Francisco contains and is adjacent to regional employment centers and major transportation thoroughfares. Two types of employment data are described below: total jobs within the community; and employed residents, including the number of residents of working age who actively participate in the civilian labor force. A comparison of these data can indicate commute patterns (i.e., whether significant out-commuting or in-commuting occurs).

The civilian labor force is the sum of civilian employment and civilian unemployment.[4] Civilians, as defined by the EDD, are age 16 years or older, are not members of the Armed Services, and are not in institutions such as prisons, mental hospitals, or nursing homes. Civilian Employment includes all individuals who worked at least 1 hour for a wage or salary, or were self-employed, or were working at least 15 unpaid hours in a family business or on a family farm, during the week including the 12th of the month. Those who were on vacation, on other kinds of leave, or involved in a labor dispute, were also counted as employed. Civilian Unemployment includes those individuals who were not working but were able, available, and actively looking for work during the week including the 12th of the month. Individuals who were waiting to be recalled from a layoff and individuals waiting to report to a new job within 30 days were also considered to be unemployed.

[4] California Employment Development Department (EDD). 2022. Methodology for Generating Labor Force Data. Website: https://www.labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-data-methodology.html. Accessed June 6, 2022.

Total Jobs

The City's economy supports jobs and businesses in industries including biomedical technologies, digital technologies, manufacturing, distribution, hospitality, and household serving retail and services.

Table 3.12-7 shows job growth in the City and the County from 2002 to 2019 (the most recent available data as of the preparation of this Draft Program EIR). The number of jobs in the City grew from 44,232 in 2002 to 67,998 in 2019, representing a 53.7 percent increase. The County grew from 340,771 jobs in 2002 to 422,723 jobs in 2019, representing a 24 percent increase. From 2002 to 2019, South San Francisco's number of jobs comprised an average of approximately 14.5 percent of the County's total jobs.[5]

Table 3.12-7: Jobs 2000-2019

Jurisdiction	2002	2010	2019	2002-2019 Change
City of South San Francisco	44,232	45,719	67,998	53.7%
San Mateo County	340,771	316,444	422,723	24.0%
City of South San Francisco Share of County	13.0%	14.4%	16.1%	–
Source: United States Census Bureau, Center for Economic Studies. 2019. OnTheMap Version 6.7: Work Area Profile Analysis. August 29. Website: https://onthemap.ces.census.gov/. Accessed May 17, 2022.				

Employed Residents

Table 3.12-8 shows employed resident growth in City and the County from 2000 to 2022. Employed residents in South San Francisco totaled approximately 38,200 in March 2022. Employment grew 22 percent in the City from 2010 to March 2022. Employed residents in the County grew from 386,700 in 2000 to 442,200 in March 2022, representing a 14.4 percent increase. During this same period, the number of employed residents in the City comprised an average of approximately 8.23 percent of the County's total employed residents.

Table 3.12-8: Employed Residents 2000-2022

Jurisdiction	2000	2010	2019	2020	March 2022[1]	2000-2022 Change
City of South San Francisco	N/A	31,300	39,000	35,200	38,200	22%
San Mateo County	386,700	359,200	447,600	407,200	442,200	14.4%
City of South San Francisco Share of County	N/A	8.7 %	8.7 %	8.6%	8.6%	–

[5] United States Census Bureau, Center for Economic Studies. 2019. OnTheMap Version 6.7: Work Area Profile Analysis. August 29. Website: https://onthemap.ces.census.gov/. Accessed May 17, 2022.

Jurisdiction	2000	2010	2019	2020	March 2022[1]	2000-2022 Change

Notes:
[1] Based on EDD Monthly Labor Force Data for March 2022.
Source:
California Employment Development Department (EDD). 2022. Monthly Labor Force Data for Cities and Census Designated Places – Preliminary. March.

California Employment Development Department (EDD). 2022. Unemployment Rates and Labor Force. San Mateo County Labor Force Data. April 15.

California Employment Development Department (EDD). 2022. Labor Force Data for Cities and Census Designated Places. Data for All County Subareas. Annual Averages: Historical Data. Unemployment Rates (Labor Force). South San Francisco. Website: https://www.labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html#CCD. Accessed May 17, 2022.

Employment Projections

As shown in Table 3.12-9, ABAG predicts that City employment growth rates will be variable in the coming decades. The County's employment growth rate is expected to increase. The ABAG employment projections for the City of South San Francisco for 2025 through 2040 (ranging from 50,075 to 54,230) are lower than the number of jobs in the City of South San Francisco in 2019 (67,998) as shown in Table 3.12-7.

Table 3.12-9: Employment Projections

Jurisdiction	2025	2030	2035	2040	2050
City of South San Francisco	50,075	51,000	51,730	54,230	N/A
San Mateo County	415,305	423,005	436,205	472,045	507,000
Numerical Change	**–**	**2025-2030**	**2030-2035**	**2035-2040**	**2040-2050**
City of South San Francisco	–	925	730	2,500	N/A
San Mateo County	–	7,700	13,200	35,840	34,955
Percent Change	**–**	**2025-2030**	**2030-2035**	**2035-2040**	**2040-2050**
City of South San Francisco	–	1.8	1.4	4.8	N/A
San Mateo County	–	1.9	3.1	8.2	7.4

Notes:
N/A = not available
Source:
Association of Bay Area Governments (ABAG). 2017. Projections 2040 by Jurisdiction. Website: https://abag.ca.gov/our-work/land-use/forecasts-projections. Accessed May 18, 2022.

Association of Bay Area Governments (ABAG). 2021. Plan Bay Area 2050 Draft Program Environmental Impact Report. June.

Overall Projections

Table 3.12-10 shows historic and ABAG's growth projections for the City of South San Francisco for population, households and jobs. As of 2019, the City had about 67,781 residents and 22,355

households. ABAG projects about 80,015 residents, 23,305 households, and 54,230 jobs in the City in 2040, for an increase of about 18 percent in residents, an increase of about 13 percent in households, and a decrease of about 20 percent in jobs as compared to 2019.

Table 3.12-10: Population, Household, and Jobs–Historic Totals and ABAG Projections

Category	Historic Totals		ABAG Projections	
	2010	2019	2030	2040
Population	63,632	67,781	76,950	80,015
Households	20,938	22,355	24,950	25,305
Jobs	45,719	67,998	51,000	54,230

Notes:
ABAG = Association of Bay Area Governments
Totals do not include unincorporated areas within city limits.
Source: United States Census Bureau. 2019: American Community Survey 1-Year Supplemental Estimates. Population by Age, Total Households.

United States Census Bureau, Center for Economic Studies. 2019. OnTheMap Version 6.7: Work Area Profile Analysis. August 29. Website: https://onthemap.ces.census.gov/. Accessed May 17, 2022.

California Department of Finance. 2012. E-4 Population Estimates for Cities, Counties, and the State, January 2001-2010, with 2000 and 2010 Census Counts. November.

California Department of Finance. 2012. E-8 Historical Population and Housing Estimates for Cities, Counties, and the State, 2000-2010. November.

Jobs to Housing Ratio

The jobs-to-housing ratio, which is the jobs-housing balance in a metro subarea, is used to evaluate whether a community has an adequate number of jobs available to provide employment for residents seeking employment. A balanced jobs-to-housing ratio is 1.0 to 1.5 jobs for every housing unit.[6] A jobs-to-housing ratio greater than 1.5 indicates that the community provides more jobs than can be filled by existing households. In this situation, the community is likely to experience traffic congestion associated with employees traveling to jobs from outside the area, as well as intensified pressure for additional residential development to house the labor force. A jobs-to-housing ratio of less than 1.0 indicates that a community has fewer jobs than can be filled by existing households, and that many residents would need to commute outside of the community for employment. The resulting commuting patterns can also lead to traffic congestion and affect both local and regional air quality. However, the jobs-to-housing ratio is best analyzed at the sub-regional or regional level due to the tendency of people to commute to jobs outside of their community.

Table 3.12-11 shows the jobs-to-housing ratio in South San Francisco for 2010, 2019, and 2040 (General Plan Update Buildout). The City's jobs-to-housing ratio was approximately 2.09 in 2010 and 2.92 in 2019. By 2040, with buildout of the proposed project, the jobs-to-housing ratio is anticipated to be approximately 3.53. As indicated in the table, the City's jobs-to-housing ratios under current

[6] Association of Bay Area Governments (ABAG). 2021. Regional Housing Needs Allocation (RHNA) Plan, San Francisco Bay Area, 2023-2031. December.

and future conditions exceed a balanced jobs-to-housing ratio of 1.0 to 1.5 jobs for every housing unit. As such, under current and future conditions, the City provides more jobs than can be filled by existing and projected households, indicating that the City is likely to experience increased traffic associated with employees traveling from outside South San Francisco to jobs located within the City, as well as intensified pressure for additional residential development to house the labor force in the City.

Table 3.12-11: Jobs to Housing–South San Francisco

Category	Historic Totals		General Plan Update Buildout
	2010	2019	2040
Jobs	45,719	67,998	137,557
Housing Units	21,814	23,307	38,959
Jobs/Housing Ratio	**2.09**	**2.92**	**3.53**

Notes:
Totals do not include unincorporated areas within City limits
Source:
Chapter 2, Project Description, of this Draft Program EIR.
United States Census Bureau. 2019: American Community Survey 1-Year Estimates Data Profiles. Housing Occupancy – Total Housing Units.
United States Census Bureau, Center for Economic Studies. 2019. OnTheMap Version 6.7: Work Area Profile Analysis. August 29. Website: https://onthemap.ces.census.gov/. Accessed May 17, 2022.
California Department of Finance. 2012. E-8 Historical Population and Housing Estimates for Cities, Counties, and the State, 2000-2010. November.

Table 3.12-12 shows the jobs-to-housing ratio in San Mateo County for 2010, 2019, and 2040. San Mateo County's jobs-to-housing ratio was approximately 1.16 in 2010 and 1.50 in 2019. By 2040, the jobs-to-housing ratio is anticipated to be approximately 1.45. As indicated in the table, San Mateo County's jobs-to-housing ratios under current and future conditions are within a balanced jobs-to-housing ratio of 1.0 to 1.5 jobs for every housing unit. As such, under current and future conditions, San Mateo County has an adequate number of jobs available that can be filled by existing and projected households.

Table 3.12-12: Jobs to Housing–San Mateo County

Category	Historic Totals		ABAG Projections
	2010	2019	2040
Jobs	316,444	422,723	472,045
Housing Units	271,031	280,500	323,755
Jobs/Housing Ratio	**1.16**	**1.50**	**1.45**

Category	Historic Totals		ABAG Projections
	2010	2019	2040

Source:
United States Census Bureau, Center for Economic Studies. 2019. OnTheMap Version 6.7: Work Area Profile Analysis. August 29. Website: https://onthemap.ces.census.gov/. Accessed May 17, 2022.
California Department of Finance. 2012. E-8 Historical Population and Housing Estimates for Cities, Counties, and the State, 2000-2010. November.

United States Census Bureau. 2019: American Community Survey 1-Year Estimates Data Profiles. Housing Occupancy – Total Housing Units.

Association of Bay Area Governments (ABAG). 2017. Projections 2040 by Jurisdiction. Website: https://abag.ca.gov/our-work/land-use/forecasts-projections. Accessed May 18, 2022.

Jobs to Employed Residents

Another helpful indicator is the relationship between the number of jobs provided to the number of employed residents within a community. A balanced jobs-to-employed residents' ratio is 1.0, which implies that there is a job in the community for every employable resident. A jobs-to-employed residents' ratio greater than 1.0 indicates that the community provides more jobs than it has employable residents. In this situation, the community is likely to experience traffic congestion associated with employees traveling to jobs from outside the area, as well as intensified pressure for additional residential development to house the labor force. A jobs-to-employed residents' ratio of less than 1.0 indicates that a community has fewer jobs than employable residents, and that many residents would need to commute outside of the community for employment. The resulting commuting patterns can also lead to traffic congestion and affect both local and regional air quality.

Table 3.12-13 shows the jobs-to-employed residents' ratio in South San Francisco for 2010, 2019, and 2040 (General Plan Update Buildout). The City's jobs-to-employed residents' ratio was approximately 1.46 in 2010 and 1.70 in 2019. By 2040, with buildout of the proposed project, the jobs-to-employed residents' ratio is estimated to be 2.95. As indicated in the table, the City's jobs-to-employed residents' ratios under current and future conditions exceed the balanced jobs-to-employed residents' ratio of 1.0. As such, under current and future conditions, the City provides more jobs than it has employable residents, indicating that the City is likely to experience increased traffic associated with employees traveling from outside South San Francisco to jobs located within the City, as well as intensified pressure for additional residential development to house the labor force in the City.

Table 3.12-13: Jobs to Employed Residents–South San Francisco

Category	Historic Totals		General Plan Update Buildout
	2010	2019	2040
Jobs	45,719	67,998	137,557
Employed Residents	31,300	39,999	46,604[1]
Jobs/Employed Residents Ratio	**1.46**	**1.70**	**2.95**

Category	Historic Totals		General Plan Update Buildout
	2010	2019	2040

Notes:
Totals do not include unincorporated areas within City limits
[1] Assumes a 22 percent increase in employed residents from March 2022 (38,200), the same increase as seen in the City from 2000 to 2022 (see Table 3.12-8).
Source:
Chapter 2, Project Description, of this Draft Program EIR.
United States Census Bureau, Center for Economic Studies. 2019. OnTheMap Version 6.7: Work Area Profile Analysis. August 29. Website: https://onthemap.ces.census.gov/. Accessed May 17, 2022.
California Employment Development Department (EDD). 2022. Labor Force Data for Cities and Census Designated Places. Data for All County Subareas. Annual Averages: Historical Data. Unemployment Rates (Labor Force). South San Francisco. Website: https://www.labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html#CCD. Accessed May 17, 2022.

Table 3.12-14 shows the jobs-to-employed residents' ratio in San Mateo County for 2010, 2019, and 2040. San Mateo County's jobs-to-employed residents' ratio was approximately 0.88 in 2010 and 0.94 in 2019. By 2040, the jobs-to-employed residents' ratio is estimated to be 1.05. As indicated in the table, the San Mateo County's jobs-to-employed residents' ratios under current conditions is slightly below the balanced jobs-to-employed residents' ratio of 1.0. As such, under current conditions, San Mateo County provides slightly fewer jobs than it has employable residents, indicating that some residents within the County commute outside the County for employment. San Mateo County's jobs-to-employed residents' ratios under future conditions is slightly above the balanced jobs-to-employed residents' ratio of 1.0. As such, under future conditions, San Mateo County is projected to provide slightly more jobs than projected employable residents, indicating that some residents outside of the County are projected to commute to the County for employment.

Table 3.12-14: Jobs to Employed Residents–San Mateo County

Category	Historic Totals		ABAG Projections
	2010	2019	2040
Jobs	316,444	422,723	472,045
Employed Residents	359,200	447,600	446,040
Jobs/Employed Residents Ratio	**0.88**	**0.94**	**1.05**

Source:
United States Census Bureau, Center for Economic Studies. 2019. OnTheMap Version 6.7: Work Area Profile Analysis. August 29. Website: https://onthemap.ces.census.gov/. Accessed May 17, 2022.
California Employment Development Department (EDD). 2022. Unemployment Rates and Labor Force. San Mateo County Labor Force Data. April 15.
Association of Bay Area Governments (ABAG). 2017. Projections 2040 by Jurisdiction. Website: https://abag.ca.gov/our-work/land-use/forecasts-projections. Accessed May 18, 2022.

Priority Development Areas

Priority Development Areas (PDAs) are geographic areas within existing communities that the Metropolitan Transportation Commission (MTC), in partnership with Bay Area local governments, have identified for future growth. PDAs are typically near high-quality transit service, and located near employment centers, shopping, and neighborhood services. The City has two PDAs: the Downtown PDA and the El Camino Real PDA, and has produced City plans for each of these areas. The El Camino Real/Chestnut Avenue Area Plan (2011) anticipates about 1,600 housing units under full project buildout, while the Downtown Station Area Specific Plan (2015) anticipates about 2,400 new jobs and 1,400 new housing units through the year 2040. As of 2019, the PDAs have not been built out but the subareas they are located in are experiencing growth; about 1,000 units and 1,615,741 nonresidential square feet are in the development pipeline in the Downtown Station Area, while 1,750 units and 835,040 nonresidential square feet are in the pipeline in the El Camino subarea.

3.12.2 - Regulatory Setting

State Housing Element Statutes

State Housing Element statutes (Government Code §§ 65580-65589.9) mandate that local governments adequately plan to meet the existing and projected housing needs of all economic segments of the community. The law recognizes that for the private market to adequately address housing needs and demand, local governments must adopt land use plans and regulatory systems that provide opportunities for, and do not unduly constrain, housing development. As a result, State housing policy rests largely upon the effective implementation of local general plans and in particular, housing elements. Additionally, Government Code Section 65588 dictates that housing elements must be updated at least once every 8 years. The City's Housing Element was certified in 2015 and is valid until 2023. The process to update the existing Housing Element for the 2023-2031 cycle is underway and will reflect the updated RHNA numbers being finalized this year. However, the update to the Housing Element is being conducted separately and is not analyzed as part of this General Plan Update.

Senate Bill 375

Senate Bill (SB) 375, adopted in October 2008, calls upon each of California's Metropolitan Planning Organizations (MPOs) to develop an integrated transportation, land use, and housing plan known as a Sustainable Communities Strategy (SCS). This SCS must demonstrate how the region will reduce greenhouse gas emissions through long-range planning. It also requires the RHNA, which anticipates housing need for local jurisdictions, to conform to the SCS, which is an opportunity to advocate for increased access to and distribution of affordable housing across the region.

2019 Housing Bills

Governor Gavin Newsom signed 18 Bills in October 2019 to address the Statewide housing crisis.[7] The Bills incentivize affordable housing, encourage accessory dwelling units (ADUs) construction, and

[7] Office of Governor Gavin Newsom, Governor Gavin Newsom Signs 18 Bills to Boost Housing Production. October 9, 2019. Website: https://www.gov.ca.gov/2019/10/09/governor-gavin-newsom-signs-18-bills-to-boost-housing-production/. Accessed April 23, 2022.

streamline permitting and approvals for residential development projects to address the California housing crisis. Consistent with these intentions and purposes, the Governor signed SB 113 by the Committee on Budget and Fiscal Review, which will enable the transfer of $331 million in State funds to the National Mortgage Special Deposit Fund, and establishes the Legislature's intent to create a trust to manage these funds to provide an ongoing source of funding for borrower relief and legal aid to vulnerable homeowners and renters.

The Governor signed the following bills to remove barriers and boost housing production:

- SB 330 by Senator Nancy Skinner (D-Berkeley) establishes the Housing Crisis Act of 2019, which will accelerate housing production in California by streamlining permitting and approval processes, ensuring "no net loss" in zoning capacity and limiting fees after projects are approved.
- AB 1763 by Assembly Member David Chiu (D-San Francisco) creates more affordable housing by giving 100 percent affordable housing developments an enhanced density bonus to encourage development.
- AB 116 by Assembly Member Philip Ting (D-San Francisco) removes the requirement for Enhanced Infrastructure Financing Districts to receive voter approval prior to issuing bonds.
- AB 1485 by Assembly Member Buffy Wicks (D-Oakland) will build on existing environmental streamlining law and encourage moderate income housing production.
- AB 1255 by Assembly Member Robert Rivas (D-Hollister) requires cities and counties to report to the State an inventory of its surplus lands in urbanized areas. The Bill then requires the State to include this information in a digitized inventory of State surplus land sites.
- AB 1486 by Assembly Member Philip Ting (D-San Francisco) expands Surplus Land Act requirements for local agencies, requires local governments to include specified information relating to surplus lands in their housing elements and annual progress reports, and requires the State Department of Housing and Community Development to establish a database of surplus lands, as specified.
- SB 6 by Senator Jim Beall (D-San José) requires the State to create a public inventory of local sites suitable for residential development, along with State surplus lands.
- SB 751 by Senator Susan Rubio (D-Baldwin Park) creates the San Gabriel Valley Regional Housing Trust to finance affordable housing projects for homeless and low income populations and address the homelessness crisis in the region.
- AB 1483 by Assembly Member Tim Grayson (D-Concord) requires local jurisdictions to publicly share information about zoning ordinances, development standards, fees, exactions, and affordability requirements. The Bill also requires the Department of Housing and Community Development to develop and update a 10-year housing data strategy.
- AB 1010 by Assembly Member Eduardo Garcia (D-Coachella) will allow duly constituted governing bodies of a Native American reservation or Rancheria to become eligible applicants to participate in affordable housing programs.

- AB 1743 by Assembly Member Richard Bloom (D-Santa Monica) expands the properties that are exempt from community facility district taxes to include properties that qualify for the property tax welfare exemption, and limits the ability of local agencies to reject housing projects because they qualify for the exemption.
- SB 196 by Senator Jim Beall (D-San José) enacts a new welfare exemption from property tax for property owned by a Community Land Trust and makes other changes regarding property tax assessments of property subject to contracts with Community Land Trusts.

The construction of ADUs can also help cities meet their housing goals and increase the State's affordable housing supply. The Governor signed the following Bills to eliminate barriers to building ADUs:

- AB 68 by Assembly Member Philip Ting (D-San Francisco) makes major changes to facilitate the approvals and development of more ADUs and address barriers to building. The Bill reduces barriers to ADU approval and construction, which will increase production of these low-cost, energy-efficient units and add to California's affordable housing supply.
- AB 881 by Assembly Member Richard Bloom (D-Santa Monica) removes impediments to ADU construction through regulations restricting local jurisdictions' permitting criteria, clarifying that ADUs must receive streamlined approval including if such units were constructed in existing garages or structures, and eliminating local agencies' ability to require owner-occupancy for 5 years.
- AB 587 by Assembly Member Laura Friedman (D-Glendale) provides a narrow exemption for affordable housing organizations to sell deed-restricted land to eligible low income homeowners.
- SB 13 by Senator Bob Wieckowski (D-Fremont) creates a tiered fee structure that charges ADUs more fairly based on their size and location. The Bill also addresses other barriers by reducing the application approval timeframe, thereby creating an avenue to bring previously unpermitted ADUs into compliance with applicable local codes, and enhancing an enforcement mechanism allowing the State to ensure that localities are complying with the ADU statute.
- AB 671 by Assembly Member Laura Friedman (D-Glendale) requires local governments' housing plans to encourage affordable ADU rentals and requires the State to develop a list of State grants and financial incentives for affordable ADUs.

2020 Housing Bills

- AB 725 requires that at least 25 percent of a metropolitan jurisdiction's share of the regional housing need for moderate income housing be allocated to sites with zoning that allows at least 4 units of housing but no more than 100 units per acre of housing. The Bill would require that at least 25 percent of a metropolitan jurisdiction's share of the regional housing need for above moderate income housing be allocated to sites with zoning that allows at least 4 units of housing.

- AB 2345 increases the density bonus available to developers who are willing to develop additional affordable units.
- AB 3308 allows school districts to utilize low income housing tax credits to develop affordable housing for teachers and other school employees on district-owned land.

2021 Housing Bills

- SB 7 extends California Environmental Quality Act (CEQA) streamlining for qualifying environmental leadership development projects approved through 2025, thereby reinstating and expanding the former AB 900 streamlining process.
- SB 8 extends the provisions of SB 330, the Housing Crisis Act of 2019, from 2025 until 2030. It allows applicants who submit qualifying preliminary applications for housing developments prior to January 1, 2030, to utilize the protections of the Housing Crisis Act through January 1, 2034, with those applications subject only to the ordinances and policies in effect at the preliminary application submittal, with limited exceptions. SB 8 clarifies that for purposes of the Housing Crisis Act, a "housing development project" may involve discretionary and/or ministerial approvals or construction of a single dwelling unit and adds demolition, relocation, and return rights.
- SB 9 requires, for qualifying parcels, ministerial approval of up to two units of housing developments in single-family zoning districts and would allow single-family parcels to be subdivided into two lots subject to ministerial approval.
- SB 10 allows local agencies to adopt an ordinance to "upzone" parcels to allow up to 10 units per parcel, at a height specified by local ordinance, if the parcel is located in a qualifying transit-rich area or an urban infill site. Ordinances and regulations adopted pursuant to SB 10 are exempt from CEQA.
- SB 290 clarifies the State Density Bous Law to extend incentives to student housing projects.
- SB 478 prohibits local governments from establishing a floor area ratio (FAR) that is less than 1.0 for projects of 3 to 7 units or less than 1.25 for projects consisting of 8 to 10 units. Local governments also cannot deny a qualifying project solely based on the fact that the lot area does not satisfy the minimum lot size requirement imposed by said local government.

Regional

Regional Housing Needs Plan

A Regional Housing Needs Plan is required under California Government Code Section 65584 to enable regions to address housing issues and meet housing needs based on future growth projections for the area. The State determines the number of total housing units needed for each region. ABAG allocates housing needs among cities and counties in the nine-county ABAG region for each jurisdiction to use in drafting its housing element. The allocation comes after projection modeling based on current general plan policies, land use designations, and zoning. The allocations are based on "smart growth" assumptions in the modeling and aim to shift development patterns from historical trends (suburban sprawl) toward a better jobs/housing balance, increased preservation of open space, and development of mixed-use, transit-accessible areas. The regional

housing need allocations are based on an analysis of the available housing stock and vacancy rate in each community, any existing unmet needs for housing, the projected growth in the number of households (population growth and household formation rate), the local and regional distribution of income, and the need for housing generated by local job growth.

Plan Bay Area 2050: A Vision for the Future

ABAG is the official comprehensive planning agency for the San Francisco Bay region, which is composed of the nine counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma, and contains 101 jurisdictions. On October 21, 2021, ABAG and the MTC, which is the region's MPO, adopted Plan Bay Area 2050, the official regional long-range plan, charting a course for a Bay Area that is affordable, connected, diverse, healthy, and vibrant for all residents through 2050 and beyond.

Plan Bay Area 2050 connects the elements of housing, the economy, transportation, and the environment through 35 strategies that will make the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges. In the short-term, the plan's Implementation Plan identifies more than 80 specific actions for MTC, ABAG, and partner organizations to take over the next 5 years to make headway on each of the 35 strategies.[8]

Local

South San Francisco General Plan Update

The proposed General Plan Update sets forth the following goals and policies relevant to population, housing, and employment.

Goal LU-3 A diverse range of housing options that create equitable opportunity for people of all ages, races/ethnicities, abilities, socioeconomic status, and family types to live in South San Francisco.

Policy LU-3.1 Create affordable workforce housing. Actively facilitate adding affordable and workforce housing in all South San Francisco neighborhoods equitably.

Policy LU-3.2 Update zoning to be in compliance with State housing law. Continually update the Zoning Ordinance to be in compliance with State housing law.

Policy: LU-3.3 Encourage diversity of housing types. Encourage a variety of housing types to be developed at a range of densities to equitably serve varying household types, including, but not limited to, single-family attached and detached, accessory dwelling units, multifamily apartments, townhomes, duplexes, triplexes, quadplexes, and condominiums.

Policy LU-3.4 Facilitate multi-generational housing. Encourage development of housing types that support multi-generational households and opportunities to age in place.

[8] Plan Bay Area 2050. 2022. Website: https://www.planbayarea.org/finalplan2050. Accessed April 22, 2022.

Policy LU-3.5 Facilitate live/work housing. Provide opportunities for live/work options to support a creative economy and meet the changing needs of workspaces.

Policy LU-3.6 Facilitate housing for all needs. Facilitate housing for seniors, special needs groups, including the developmentally disabled, and non-traditional family groups by requiring a diverse range of housing configurations that are Americans with Disabilities Act (ADA) compliant and flexible.

Policy LU-3.7 No net loss in housing. Require no net loss in the number of residential units during reconstruction or renovation.

Policy LU-3.8 Implement Inclusionary Housing Ordinance and State Density Bonus. Continue to implement the City's Inclusionary Housing Ordinance and State Density Bonus to encourage development of housing affordable to low income households.

Policy LU-3.9 Incentivize and preserve affordable housing and develop models to expand homeownership. Develop regulatory mechanisms via the Zoning Ordinance, Inclusionary Housing Ordinance, and community benefits agreements to incentivize development of affordable housing, including workforce housing, and develop programming to preserve affordable housing and expand homeownership.

Goal LU-4 High-quality residential neighborhoods.

Policy LU-4.2 Encourage small-scale residential infill development. Encourage small-scale residential infill development in existing residential neighborhoods.

Goal LU-6 Opportunities for industrial uses to thrive in Lindenville and East of 101.

Goal LU-7 A diverse economy and range of businesses by maintaining, beautifying, and expanding spaces for neighborhood commercial, including retail, restaurants, and small offices.

City of South San Francisco General Plan Housing Element

The 2015-2023 General Plan Housing Element, adopted in April 2015, sets forth the following goals and policies relevant to population, housing, and employment. The Housing Element, one of seven State-required general plan elements, is updated on a statutorily prescribed schedule and, because it was last certified in 2015, it is valid until 2023. Accordingly, the process of updating the existing Housing Element is underway and is being conducted simultaneously to, but not analyzed as part of, this General Plan Update.

Goal 1 Promote the provision of housing by both private and public sectors for all income groups in the community.

Policy 1-1 The City shall implement zoning to ensure there is an adequate supply of land to meet its 2014 to 2022 ABAG Regional Housing Needs Allocation (RHNA) of 565 very low income units, 281 low income units, 313 moderate income units, and 705 above moderate income units.

Policy 1-2 The City shall continue to implement the Inclusionary Housing Ordinance.

Policy 1-4 The City shall work with for-profit and nonprofit developers to promote the development of housing for extremely low-, very low-, and lower-income households.

Policy 1-5 The City shall encourage a mix of residential, commercial, and office uses in the areas designated as Priority Development Areas (PDAs), properties located in the South San Francisco BART Transit Village Zoning District and in proximity to BART and Caltrain stations and along El Camino Real, consistent with the Grand Boulevard Initiative.

Policy 1-6 The City shall support and facilitate the development of second units on single-family designated and zoned parcels.

Policy 1-7 The City shall maximize opportunities for residential development, through infill and redevelopment of underutilized sites, without impacting existing neighborhoods or creating conflicts with industrial operations.

Goal 3 The City of South San Francisco will strive to maintain and preserve existing housing resources, including both affordable and market-rate units.

Policy 3-1 Encourage reinvestment in older residential neighborhoods and rehabilitation of housing, especially housing for very low-, low- and moderate income households. As appropriate, the City shall use local, State, and Federal funding assistance to the fullest extent these subsidies exist to facilitate housing rehabilitation.

Policy 3-4 The City shall support the preservation of public affordable housing stock.

Policy 4-1 The City shall prohibit new residential development in areas containing major environmental hazards (such as floods, and seismic and safety problems) unless adequate mitigation measures are taken.

Policy 4-3 The City shall not allow new residential or noise-sensitive development in the 70 dB+ CNEL areas impacted by the San Francisco International Airport (SFO) operations and shall require aviation easements for new residential development in the area between 65 and 69 dB CNEL SFO noise contours.

Goal 5 Support the development of an adequate supply of safe, decent, and affordable housing for groups with special housing needs.

Policy 5-9 The City shall amend its Zoning Ordinance to comply with Health and Safety Code Section 17021.5 regarding employee housing for six or fewer employees.

City of South San Francisco Municipal Code and Zoning Ordinance

The City of South San Francisco Municipal Code and Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, contain several existing provisions to address the location and design of new and renovated housing units. Chapter 20.480 outlines design review, Section 20.350.035 regulates ADUs, Chapter 19.36 regulates condominiums and community housing projects, Chapter 20.380 regulates inclusionary housing, Chapter 20.390 implements State density bonus law, Chapter 20.070 regulates residential zoning districts, and Chapter 20.080 regulates downtown residential districts. Chapter 8.96 outlines the commercial linkage fee, the revenue of which, can be used to fund new housing, preserve existing units, or acquire new land for nonprofit developers. The South San Francisco Municipal Code also regulates commercial and industrial land uses, which guides employment.

3.12.3 - Methodology

This analysis identifies potential impacts within the South San Francisco Planning Area related to population, housing, and employment based on development anticipated from the proposed project (collectively, the General Plan Update, Zoning Code Amendments, and Climate Action Plan). Impacts to population, housing, and employment were assessed using the significance criteria established by CEQA Guidelines, as well as State, and local plans, regulations, and ordinances.

3.12.4 - Thresholds of Significance

According to the CEQA Guidelines Appendix G Environmental Checklist, to determine whether impacts related to population, housing, and employment are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

3.12.5 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the proposed project and provides mitigation measures where appropriate.

Population Growth Inducement

Impact POP-1:	**The proposed project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).**

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. The majority of potential growth would occur within the East of 101, Lindenville, Downtown, and El Camino planning subareas (Chapter 2, Project Description, Exhibit 2-5). As described in further detail in Chapter 2, Project Description, the

proposed project anticipates approximately 14,312 net new housing units, with a projected total of 38,959 housing units by 2040. The proposed project anticipates approximately 42,297 net new employment opportunities, with a projected total of 137,557 employment opportunities by 2040. This new growth would increase the City's population by approximately 40,068. Table 3.12-15 summarizes the proposed project's buildout population estimate. As shown in the table, the buildout population would be 107,203 by 2040. The proposed project would allow for population growth; however, for the reasons discussed below, it would not be unplanned.

Table 3.12-15: Buildout Population Estimate

Current Population (2022)	Additional Population Growth	Buildout Population (2040)
67,135	40,068	107,203

Source:
California Department of Finance. 2021. Population Estimate for Cities, Counties, and the State with Annual Percentage Change–January 1, 2020, and 2021. Website: http://dof.ca.gov/Forecasting/Demographics/Estimates/E-1/. Accessed January 29, 2022.
Chapter 2, Project Description, of this Draft Program EIR.

The proposed project seeks to achieve a greater balance in the jobs-to-employed residents' ratio to meet project objectives and reduce Vehicle Miles Traveled (VMT). The jobs-to-housing balance and the employed resident to available jobs ratio illustrates the quantitative relationship between jobs located within the City and residents of the City who are employed. A ratio of 1.0 indicates a balance (i.e., the number of in- and out-commuters is equal); a ratio of less than 1.0 indicates lower jobs availability and a ratio greater than 1.0 indicates an employment surplus. As noted above, the additional population growth is less than the anticipated net new employment opportunities.

Table 3.12-11 shows the jobs-to-housing ratio in South San Francisco for 2010, 2019, and 2040 (General Plan Update Buildout). The City's jobs-to-housing ratio was approximately 2.09 in 2010 and 2.92 in 2019. By 2040, with buildout of the proposed project, the jobs-to-housing ratio is anticipated to be approximately 3.53. As such, the City's jobs-to-housing ratios under current and future conditions exceed a balanced jobs-to-housing ratio of 1.0 to 1.5 jobs for every housing unit. Therefore, under current and future conditions, the City provides more jobs than can be filled by existing and projected households. Table 3.12-13 shows the jobs-to-employed residents' ratio in South San Francisco for 2010, 2019, and 2040 (General Plan Update Buildout). The City's jobs-to-employed residents' ratio was approximately 1.46 in 2010 and 1.70 in 2019. By 2040, with buildout of the proposed project, the jobs-to-employed residents' ratio is estimated to be 2.95. As such, the City's jobs-to-employed residents' ratios under current and future conditions exceed the balanced jobs-to-employed residents' ratio of 1.0. Therefore, under current and future conditions, the City provides more jobs than it has employable residents. These results indicate that the City is likely to experience increased traffic associated with employees traveling from outside South San Francisco to jobs located within the City, as well as intensified pressure for additional residential development to house the labor force in the City.

Many of the General Plan Update's policies and actions plan for and guide growth within the City through 2040. The General Plan Update identifies areas for future residential and commercial development that would be required to abide by policies and actions to ensure that new development or redevelopment does not induce substantial population growth either directly or indirectly. Overall, the General Plan Update accounts for the 2015-2023 Regional Housing Need Allocation as outlined by the ABAG. Policy LU-3.7 requires no net loss in housing, meaning that the number of residential units for a particular site would not be reduced by reconstruction or renovation projects to result in a loss of units. Policy LU 3.4 facilitates multi-generational housing. Policy LU-3.5 facilitates live/work housing. Goal LU-4 identifies high-quality residential neighborhoods. The General Plan Update's Subareas Element augments citywide goals and policies from the Land Use and Community Design Element and provides policies and implementation actions specific to subareas related to housing and employment. The General Plan Update's goals, policies and actions support the objectives of the City and would not result unplanned direct or indirect population growth.

The South San Francisco Municipal Code also contains regulations regarding housing and land use types that affect population and employment. In particular, Title 20, Zoning of the Municipal Code implements the City's General Plan and provides a precise guide for the physical development of the City, consistent with the goals and policies of the General Plan. As such, the Municipal Code would not result in unplanned direct or indirect population growth.

Future expansion of City services (such as fire services, see Section 3.13, Public Services) has been planned for in the General Plan Update to accommodate expected growth and therefore would not be expected to allow for indirect unplanned growth. Future development would be reviewed by the City for compliance with the policies and actions of the General Plan Update, the City's Municipal Code, and the mitigation measures referenced in other sections of this Draft Program EIR and project-specific environmental documentation, further ensuring that unplanned direct or indirect population growth would not occur.

By virtue of the fact that the General Plan Update is the long-range blueprint for growth and development in the City, and the Municipal Code guides implementation of the General Plan Update, the additional population growth (both in housing and employment) would be considered planned growth. Moreover, because the City has supported urban growth and development for more than 100 years and is served with infrastructure (e.g., roads, freeways, railroads, transit, water, sewer, storm drainage, electricity, natural gas, etc.) implementation of the proposed project would not result in indirect growth. Impacts would be less than significant.

Level of Significance

Less than significant impact.

Housing Displacement

Impact POP-2:	**The proposed project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.**

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. The proposed project anticipates approximately 14,312 net new housing units and approximately 42,297 net new employment opportunities by 2040. This new growth would increase the City's population by approximately 40,068.

The General Plan Update includes policies and actions to ensure that existing housing is appropriately protected, and additional housing is added to support future growth within the City by 2040. The proposed project includes land use and Zoning Code Amendments but does not propose or approve any specific development that would result in the displacement of existing housing units or people, necessitating the construction of replacement housing elsewhere. As noted in Impact POP-1, the General Plan Update Policy LU-3.7 requires no net loss in the number of residential units during reconstruction or renovation. Goal LU-3 and Policy LU-3.3 encourage a diverse range of housing types and options. Policy LU-3.1 requires the active facilitation of adding affordable workforce housing. Policy LU-3.5 facilitates live/work housing. Policy LU-3.6 facilitates housing for all needs. The process of updating the existing Housing Element is underway and is being conducted simultaneously to, but not analyzed as part of, this proposed project. However, once certified, the Housing Element's goals and policies would also be applicable to future development within the City. The 2023-2031 RHNA as outlined in Table 3.12-6, is expected to be appropriately incorporated into the Housing Element to guide the City in meeting the housing provision goals.

The City of South San Francisco Municipal Code and Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, contain several existing provisions to address the location and design of new and renovated housing units. Chapter 20.480 outlines design review, Section 20.350.035 regulates ADUs, Chapter 19.36 regulates condominiums and community housing projects, Chapter 20.380 regulates inclusionary housing, Chapter 20.390 implements State density bonus law, Chapter 20.070 regulates residential zoning districts, and Chapter 20.080 regulates downtown residential districts. Chapter 8.96 outlines the commercial linkage fee, the revenue of which, can be used to fund new housing, preserve existing units, or acquire new land for nonprofit developers. The South San Francisco Municipal Code also regulates commercial and industrial land uses, which guides employment.

Furthermore, as the City receives development applications for subsequent development under the proposed project, those applications will be reviewed by the City of South San Francisco for compliance with the policies and actions of the General Plan Update and the South San Francisco Municipal Code and Zoning Ordinance to ensure the displacement of housing or significant need for new housing does not occur.

As such, the proposed project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere and impacts would be less than significant.

Level of Significance

Less than significant impact.

3.12.6 - Cumulative Impacts

The geographic context for analysis of cumulative impacts related to population, housing, and employment includes the nine Bay Area counties (San Mateo, San Francisco, Santa Clara, Marin, Sonoma, Napa, Solano, Alameda, and Contra Costa). This analysis evaluates whether impacts of the proposed project, together with impacts of cumulative development, would result in a cumulatively significant impact with respect to population, housing, and employment. This analysis then considers whether incremental contribution of the impacts associated with implementation of the proposed project would be significant. Both conditions must apply for cumulative effects to rise to the level of significance.

As shown in Table 3.12-2, ABAG projects that from 2025 to 2040 the population of San Mateo County will increase from approximately 816,460 to 916,590, an increase of approximately 100,130 people, or, on average, approximately 0.8 percent increase per year. For the City of South San Francisco, ABAG projects that from 2025 to 2040, population is projected to increase from 71,080 to 80,015, or, on average, approximately 0.8 percent increase per year. As such, the City and County growth rates are expected to be approximately similar.

The general plans and other planning documents prepared by the jurisdictions within the nine Bay Area counties (San Mateo, San Francisco, Santa Clara, Marin, Sonoma, Napa, Solano, Alameda, and Contra Costa) would be required to develop land use plans that comply with State law and that would accommodate the existing and forecasted population, similar to the long-range planning guidance included in the proposed project. Consistent with State law, these planning documents would be required to provide adequate housing to accommodate forecasted numbers of people within the jurisdiction, and displaced development, if any, would be replaced primarily within the jurisdiction. Further, new development would be required to address potential environmental impacts as part of individual project review. As such, cumulative development would not induce substantial unplanned population growth, either directly or indirectly. Because cumulative projects would comply with all applicable land use plans to provide adequate development within a jurisdiction, cumulative impacts would be less than significant.

Moreover, the proposed project would not have a cumulatively considerable contribution to the less than significant cumulative impact. As the City's projected population growth is within projected growth estimates, and the growth would be occurring primarily through infill development within the City, the proposed project's contribution to this less than significant cumulative impact would not be cumulatively considerable. The proposed project would not result in any policies or physical improvements that would result in direct or indirect unplanned regional growth or result in substantial displacement of people or the need to construct additional housing and therefore would not contribute to a cumulative impact.

Therefore, the proposed project would not have a cumulatively considerable cumulative impact.

Level of Cumulative Significance

Less than significant impact.

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3.13 - Public Services and Recreation

3.13.1 - Introduction

This section of the Draft Program Environmental Impact Report (Draft Program EIR) addresses potential environmental effects related to fire protection services, police services, schools, and libraries within the South San Francisco General Plan Update Planning Area (Planning Area) resulting from implementation of the General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project). This section also includes an overview of existing parks, recreational facilities, and open space areas and identifies potential impacts to City parks and recreational facilities, County parks, State Parks, and open space areas from implementation of the proposed project. Future discretionary projects facilitated by the proposed project will be evaluated for project-specific impacts related to public services and recreation at the time they are proposed.

The following comments related to Public Services and Recreation were received in response to the Notice of Preparation (NOP). The comment letters are included in Appendix A.

- Requests that the proposed project include parks, park improvements, and green space on the east side of the City and in neighborhoods such as Old Town, Downtown, Peck's Lots, and Cypress Park.
- Requests that the City provide additional free shuttle routes.
- Suggests that affordable and free internet be provided for low-income communities.
- Suggests that the City provide art and recreational programs in Old Town.

The descriptions and analysis in this section are based, in part, on statements, data, and figures provided by the following reference materials.

- South San Francisco General Plan Update
- South San Francisco Municipal Code
- City of South San Francisco Department of Parks and Recreation
- South San Francisco Fire Department
- South San Francisco Police Department
- South San Francisco Unified School District
- South San Francisco Public Library

3.13.2 - Environmental Setting

Fire Protection and Emergency Medical Services

Northern California

The California Department of Forestry and Fire Protection (CAL FIRE) is responsible for fire protection and stewardship of over 31 million acres of California's privately owned wildlands. CAL FIRE also provides varying levels of emergency services in 36 of the California's 58 counties via contracts with

local governments. Because of the Department's size and major incident management experience, it is often asked to assist or take the lead in disasters.[1] In October 2017, a series of wildfires occurred in Northern California resulting in extensive property damage. In November 2018, the Camp Fire wildfire occurred in Northern California, resulting in the deadliest wildfire to occur in State history.[2] In September and October 2020, the Glass Fire burned over 67,484 acres and destroyed 1,555 structures, including 308 homes and 343 commercial buildings in Napa County, as well as 334 homes in Sonoma County.[3]

South San Francisco Fire Department

The South San Francisco Fire Department (SSFFD) provides services in fire suppression and prevention, emergency medical services, urban and marine search and rescue, hazardous materials, public education, and disaster preparedness. The SSFFD has firefighters and paramedics located in five different fire stations throughout the City (see Table 3.13-1) and is dispatched to a variety of incidents, including structure fires, hazardous materials, medical calls, and traffic accidents.[4] Exhibit 3.13-1 shows the fire station response areas. In addition to the Fire Stations, the SSFFD maintains the Emergency Operations Center at 490 North Canal Street and a training tower at 480 North Canal Street.

Table 3.13-1: Fire Stations

Station Number	Street Address
Fire Station 61	480 North Canal Street
Fire Station 62	249 Harbor Way
Fire Station 63	33 Arroyo Drive (Municipal Services Building)
Fire Station 64	2350 Galway Drive
Fire Station 65	1151 South San Francisco Drive
Source: South San Francisco Fire Department (SSFFD). 2022. Fire Stations. Website: https://www.ssf.net/departments/fire/about-us. Accessed February 22, 2022.	

The SSFFD manages and maintains emergency plans and training of City staff and community members. Through public education events and training sessions, the SSFFD focuses on activities that will prepare the community to take care of itself in the period immediately following a local disaster. For example, the Community Emergency Response Team (CERT) program educates volunteers about disaster preparedness for the hazards that may impact their area and trains them

[1] California Department of Forestry and Fire Protection (CAL FIRE). 2022. About Us. Website: https://www.fire.ca.gov/about-us/. Accessed February 16, 2022.
[2] California Department of Forestry and Fire Protection (CAL FIRE). 2021. Top 20 Deadliest California Wildfires. Website: https://www.fire.ca.gov/media/lbfd0m2f/top20_deadliest.pdf. Accessed February 16, 2022.
[3] California Department of Forestry and Fire Protection (CAL FIRE). 2020. Glass Fire. Website: https://www.fire.ca.gov/incidents/2020/9/27/glass-fire/. Accessed February 16, 2022.
[4] South San Francisco Fire Department (SSFFD). 2022. About Us. Website: https://www.ssf.net/departments/fire/about-us. Accessed February 22, 2022.

in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations.[5]

The SSFFD staff includes 87 full-time equivalent firefighter and emergency medical employees and 4.68 hourly and contract employees.[6] Each of the five stations is staffed in three shifts comprised of a Fire Captain, Fire Apparatus Engineer, and up to three Paramedic/Firefighters, all supervised by one on-duty Battalion Chief. There is always a minimum of 20 fire suppression personnel supported by an additional two emergency medical technicians. Emergency response teams of 24 personnel are assigned to three shifts, staffing all five stations in any of nine vehicles, being four fire engines, one quintuple apparatus (fire engine with ladder), three ambulances, and a command vehicle. Other reserve emergency vehicle assets include three fire engines, one quintuple apparatus, two ambulances, a command vehicle, two utility vehicles, and an urban search and rescue vehicle. SSFFD staffing includes the Emergency Services Manager and personnel to support office operations and emergency response. Fleet and station additions in the past two decades include the Emergency Operations Center (EOC), training tower, urban search and rescue vehicle, water rescue boats, oil spill boom trailer, and an additional ambulance. The fiscal year 2022 adopted budget for the SSFFD was $29,549,700.[7]

Service Ratio

With a population of 67,135 in the City as of 2022, the SSFFD has a current service ratio of approximately 1.3 full-time firefighters and emergency medical personnel per 1,000 residents. This does not include contracted emergency medical personnel.

Response Times

The SSFFD bases its response times on the National Fire Protection Association 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments Scope, which defines levels of service, staffing, deployment capabilities, and other critical requirements for career fire departments. The SSFFD aims to have the first apparatus vehicle on the scene of an emergency within 7 minutes and 30 seconds of a call (which includes a 4-minute travel time), 90 percent of the time, and to have a full alarm assignment on scene within 11 minutes and 30 seconds, 90 percent of the time. In 2021, the average response time was approximately 5 minutes and 31 seconds. In 2021, the SSFFD responded to 8,460 incidents (calls), including 204 for fire, 5,912 for emergency medical services, 213 for hazardous conditions, 879 for good intent (nothing found), 471 for service, 38 for other, and 743 for false alarms.[8]

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[5] South San Francisco Fire Department (SSFFD). 2022. Emergency Preparedness. Website: https://www.ssf.net/departments/fire/emergency-preparedness. Accessed February 22, 2022.

[6] Samson, Matt. Deputy Fire Chief, South San Francisco Fire Department (SSFFD). Personal communication: telephone. March 21, 2022.

[7] City of South San Francisco. Fiscal Year 2021-22 Adopted Budget and Capital Improvement Program. Website: https://city-south-san-francisco-ca-budget-book.cleargov.com/3080/introduction/transmittal-letter. Accessed March 20, 2022.

[8] South San Francisco Fire Department (SSFFD). 2021. Activity Record. Website: https://www.ssf.net/home/showpublisheddocument/25434/637775955187370000. Accessed March 19, 2022.

Community Civic Campus

The City Council approved the schematic design of a new civic center complex in June 2019. Phase 3 will include a fire station to be located at the corner of Arroyo Drive and Camaritas Avenue. This phase is not yet fully funded.[9]

Police Protection

The South San Francisco Police Department (SSFPD) provides police protection services throughout the City with the exception of unincorporated County areas, which are under the jurisdiction of the San Mateo County Sheriff's Office. The SSFPD has 83 sworn and 35 civilian positions and is divided into two Divisions: Operations and Services.[10] The Operations Division includes patrol, criminal investigations, downtown bike patrol, K-9, neighborhood response team, Special Weapons and Tactics (SWAT), hostage negotiations, and the traffic unit. The Services Division includes communications, community relations, property/evidence, records, planning, and recruiting. Each Division is commanded by a Captain. The Operating Division includes a Chief of Police, three Captains, and four Lieutenants. The SSFPD employs community-oriented policing and other programs in order to build trust with the community. Programs include neighborhood watch groups, youth programs, citizens' police academies (including academies targeted toward youth and Latino populations), career exploration programs, and volunteer programs. The fiscal year 2022 adopted budget for the SSFPD was $32,386,774.[11]

The SSFPD operates out of one station located at 1 Chestnut Ave. This station finished construction in late 2021 and provides a backup EOC. There is also a substation at 329 Miller Avenue with limited hours of operation, providing space for officers to write reports and take breaks.

The San Mateo County Emergency Operations Plan (EOP) establishes policies and procedures and assigns responsibilities to ensure the effective management of emergency operations within the San Mateo County Operational Area.[12] The San Mateo County EOP organizes various departments and agencies into 17 Emergency Functions to facilitate planning and coordination prior to an incident and to achieve an effective emergency response and recovery.

Emergency Function 13, Law Enforcement, provides a mechanism for coordinating and providing adequate support to authorities for law enforcement, public safety, and security capabilities and resources during an emergency or disaster situation. This includes normal law enforcement responsibilities such as evacuation and movement of the public away from a hazard area and enforcing limited access to hazardous or isolation areas.

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[9] City of South San Francisco. 2021. Community Civic Campus Program. Website: http://www.communityciviccampus.net/. Accessed April 6, 2022.

[10] South San Francisco Police Department (SSFPD). 2022. Police Department. Website: https://www.ssf.net/departments/police. Accessed March 20, 2022.

[11] City of South San Francisco. Fiscal Year 2021-22 Adopted Budget and Capital Improvement Program. Website: https://city-south-san-francisco-ca-budget-book.cleargov.com/3080/introduction/transmittal-letter. Accessed March 20, 2022.

[12] County of San Mateo Office of Emergency Services and Homeland Security. 2015. San Mateo County Emergency Operations Plan. Website: https://hsd.smcsheriff.com/sites/default/files/downloadables/1%20-%20Emergency%20Operations%20Plan.pdf. Accessed February 9, 2022.

Service Ratio

With a population of about 67,135 in the City as of 2022, the SSFPD has a current service ratio of 1.2 sworn officers per 1,000 residents.

Response Times

In 2021, the SSFPD response times to Priority 1 (emergency) calls averaged 5:27 minutes and nonemergency Priority 2 and 3 calls averaged 14:49 and 29:50 minutes, respectively. The SSFPD considers these response times acceptable.[13] There is not currently a standard response time, nor is there any obligated standard to measure against. Staffing needs are addressed through the Fiscal Year 2021-22 Adopted Operating Budget.

Schools

The South San Francisco Unified School District (SSFUSD) provides kindergarten through 12th grade education to South San Francisco residents and portions of Daly City and San Bruno. The SSFUSD operates nine elementary schools (K-5), four middle schools (6-8), three high schools (two 9-12 high schools and one continuation high school), and one adult education program. Additionally, the SSFUSD facilitates a Child Development Program offering a full-day licensed preschool at three sites within the City. Out of the nine public elementary schools within the SSFUSD, five are located within the City limits. However, South San Francisco residents can apply to transfer to another school located outside of the City limits but within the SSFUSD. Public schools are listed in Table 3.13-2 and shown in Exhibit 3.13-2.

As of 2022, the SSFUSD does not plan to open an additional school facility. The SSFUSD has closed several facilities and is leasing the former Foxridge School site to a childcare facility, the Serra Vista School site to Unitek College, and the Hillside School site to Mills Montessori school.

Five private schools in the Planning Area offer preschool through 12th grade education. Four are Christian institutions and one is a Montessori school. In addition, Unitek College, which offers higher education in nursing and medical assistance career fields, has a campus in South San Francisco. Skyline College is one of three community colleges in the San Mateo County Community College District and is the closest community college to South San Francisco. These institutions are listed in Table 3.13-2.

Table 3.13-2: Schools Serving South San Francisco

School	Address	2021-2022 Enrollment
Public		
Elementary Schools (K-5)		
Buri Buri	325 Del Monte Avenue	601
Junipero Serra*	151 Victoria Street, Daly City	314

[13] Kennan, Elizabeth. Communications and Records Manager, South San Francisco Police Department (SSFPD). Personal communication: email. April 6, 2022.

School	Address	2021-2022 Enrollment
Los Cerritos	210 West Orange Avenue	304
Martin	35 School Street	404
Monte Verde*	2551 Street Cloud Drive, San Bruno	530
Ponderosa*	295 Ponderosa Road	411
Skyline*	55 Christen Avenue, Daly City	402
Spruce	501 Spruce Avenue	516
Sunshine Gardens	1200 Miller Avenue	360
Middle Schools (6-8)		
Alta Loma	116 Romney Avenue	700
Parkway Heights	650 Sunset Drive	614
Westborough	2570 Westborough Boulevard	611
High Schools (9-12)		
Baden Continuation	825 Southwood Drive	107
El Camino	1320 Mission Road	1,267
South San Francisco	400 B Street	1,321
Adult Education		
South San Francisco Adult Education	825 Southwood Drive	–
Private Schools		
All Souls Catholic School (K-8)	479 Miller Avenue	235
Hillside Christian Academy (Pre-K–8)	1415 Hillside Boulevard	–
Mills Montessori (Pre-K–8)	1400 Hillside Boulevard	–
St. Veronica (K-8)	434 Alida Way	276
Roger Williams Academy (K-12)	600 Grand Avenue	–
Shiloh United School (K-11)	500 Miller Avenue	–
Colleges/Universities		
Unitek College South San Francisco	257 Longford Drive	–
Skyline College*	3300 College Drive, San Bruno	–

Notes:
* School not in city limits but serves residents of South San Francisco.
– = Data not available.
Sources: South San Francisco Unified School District (SSFUSD). 2021-22 Local Control Accountability Plan and Annual Update. Website: https://www.ssfusd.org/lcap. Accessed March 28, 2022.
California Department of Education. 2021. Private School Data. Website: https://www.cde.ca.gov/ds/si/ps/. Accessed April 5, 2022.

Enrollment and Capacity

Table 3.13-3 identifies the number of students enrolled in the SSFUSD by academic year. As shown in Table 3.13-3, SSFUSD enrollment has decreased since 2014. The existing capacity within the SSFUSD as of March 2022 is 12,000 students.[14] With a current enrollment of 7,888 students, schools in the district are operating at a capacity of approximately 65.7 percent.

Table 3.13-3: South San Francisco Unified School District Enrollment

School Level	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Elementary	4,158	4,079	4,058	3,951	3,847	3,847	3,726	3,572
Middle	2,017	2,000	1,983	1,978	1,930	1,919	1,781	1,716
High	2,936	2,862	2,838	2,778	2,708	2,672	2,675	2,600
Adult Education	–	–	–	–	–	–	–	–
Total	**9,111**	**8,941**	**8,879**	**8,707**	**8,485**	**8,438**	**8,182**	**7,888**

Notes:
– = Data not available.
Sources: California Department of Education. DataQuest. Website: https://dq.cde.ca.gov/dataquest/. Accessed April 5, 2022.
Langley, Jessen. Student Services, South San Francisco Unified School District (SSFUSD). Personal communication: telephone. March 7, 2022.

Preschools

South San Francisco has 18 preschools (Table 3.13-4). Three preschools (Little Steps, Siebecker, and Westborough) are owned and operated by the City.

Table 3.13-4: Preschools in South San Francisco

Preschool	Address
Building Kidz	600 Grand Avenue
Children's Center	530 Tamarack Lane
Daycare and Preschool Flores	735 Commercial Avenue
Friends to Parents	2525 Wexford Avenue
Gateway Child Development Center (Owned by the City of South San Francisco and operated by the YMCA	559 Gateway Boulevard
Genentech's 2nd Generation	1151 South San Francisco Drive
Hillside Preschool	1400 Hillside Boulevard
Let's Play in Spanish	800 Grand Avenue

[14] Langley, Jessen. Student Services, South San Francisco Unified School District (SSFUSD). Personal communication: telephone. March 7, 2022.

Preschool	Address
Little Hugs Preschool	740A Del Monte Avenue
Little Steps Preschool*	520 Tamarack Lane
Martin Elementary Preschool	35 School Street
Parkside Day School	301 El Camino Real
Precious Guidance Preschool	114 Manzanita Avenue
RW Drake Preschool Center	609 Southwood Drive
Siebecker Preschool*	510 Elm Street
Temporary Tot Tending	350 Dolores Way
The Early Years Preschool	371 Allerton Avenue
Westborough Preschool*	2380 Galway Drive

Notes:
* Preschool owned and operated by the City of South San Francisco
Source: South San Francisco Unified School District (SSFUSD). Child Development Program. Website: https://www.ssfusd.org/cdp. Accessed April 5, 2022.

Libraries

The South San Francisco Public Library provides free public library and literacy services at three facilities: the Main Library, the Grand Avenue Branch Library, and the Community Learning Center. The two libraries provide core library services, including free access to books, magazines, recorded books, DVDs, CDs, e-books, and streaming video. In addition, iPads and laptops are available for checkout in the Technology Learning Centers in both libraries, where community members of all ages may also receive one-on-one technical assistance and digital literacy classes. Makerspaces for all ages supports the development of Science, Technology, Engineering, and Mathematics (STEM) skills. The library provides on-site access to computers, including high-speed wireless internet access. The Language Collections reflect and support the diversity of the community, providing a range of materials in a variety of world languages. Children's materials are frequently checked out and family story times and programs are well-attended. Storytime is held daily at the library, and in a number of languages, including Cantonese, Mandarin, Portuguese, Spanish, and Tagalog. Literacy programs, including Project Read and the Community Learning Center, provide one-on-one tutoring, financial, health and computer literacy workshops, and an afterschool homework program for at-risk students. Locations of libraries are listed in Table 3.13-5.

Table 3.13-5: Libraries

Library Facility	Services and Events
Main Library 840 West Orange Avenue	• Collections include DVDs and blu-rays, updated consumer health/medical collections, and large print and self-help material. • Technology Learning Center and makerspaces. • Interactive infant and toddler story times in a variety of languages. • Programs and events for children, families, teens, adults, seniors.

Library Facility	Services and Events
	• Summer learning programming. • More than 40 computers with internet. • Events for children and adults.
Grand Avenue Library 306 Walnut Avenue	• Renovated in 2016, including increased technology, programs, and events to meet community demand. • Provides services for low-income community. • Technology Learning Center and Marker Space. • Interactive infant and toddler story times in a variety of languages.
Community Learning Center 520 Tamarack Lane	• Provides educational programs focused on family support and community building. • Afterschool homework program for at-risk elementary school children. • Special programming for adults and families, including technology learning and assistance, citizenship classes, English classes, Support for special needs communities. • Partners with the School District, Skyline College, local agencies, non-profits, businesses, and the community.
Source: City of South San Francisco, Public Library Strategic Plan 2016-2020. Website: https://www.ssf.net/home/showpublisheddocument/98/636317385639330000. Accessed March 7, 2022.	

Community Civic Campus

As previously stated, the City Council approved the schematic design of a new civic center complex in June 2019. Phase 2 includes a combined facility shared by the Library and Parks and Recreation Departments to be located along El Camino Real between Chestnut Avenue and Arroyo Drive, which broke ground in January 2021 and is currently under construction.[15] The new Main Library would contain expanded access to materials, technology, programs, early literacy interactive spaces, and teen, senior and civic engagement opportunities. The fiscal year 2022 adopted budget for the library was $6,221,935.[16]

Parks, Recreational Facilities, and Open Space

State Parks

The California Department of Parks and Recreation (DPR) provides access to parks and open spaces within 279 State park units, over 340 miles of coastline, 970 miles of lake and river frontage, 15,000 campsites, 5,200 miles of trails, 3,195 historic buildings and more than 11,000 known prehistoric and historic archaeological sites.[17] San Bruno Mountain State Park is located adjacent to and north of the Planning Area (Chapter 2, Project Description, Exhibit 2-2), and is operated by San Mateo County Parks Department and described below.

[15] City of South San Francisco. 2021. Community Civic Campus Program. Website: http://www.communityciviccampus.net/. Accessed April 6, 2022.

[16] City of South San Francisco. Fiscal Year 2021-22 Adopted Budget and Capital Improvement Program. Website: https://city-south-san-francisco-ca-budget-book.cleargov.com/3080/introduction/transmittal-letter. Accessed March 20, 2022.

[17] California Department of Parks and Recreation (DPR). 2022. About Us. Website: https://www.parks.ca.gov/?page_id=91. Accessed April 6, 2022.

Regional Parks

The San Mateo County Parks Department operates two parks in the vicinity of the City. San Bruno Mountain State and County Park comprises 2,416 acres and ranges in elevation from 250 feet to 1,314 feet at the summit. The park provides hiking trails, picnic sites, and grass areas for recreational activities such as volleyball, frisbee, and kite flying. Junipero Serra Park comprises 108 acres and provides a visitor center, playground, picnic areas, and trails.[18]

City of South San Francisco

Existing Parks and Open Space

As of 2022, 316 acres of developed parklands, open space, and joint use facilities are within the City limits (Exhibit 3.13-3). This includes improved parkland (131 acres), open space (108 acres), and joint use facilities (77 acres). The City retains joint use agreements with other public agencies like the SSFUSD, Pacific Gas and Electric Company (PG&E), San Francisco Public Utilities Commission (SFPUC), and Bay Area Rapid Transit (BART) to allow residents access to additional improved parkland and open space. The City also maintains an additional 30 to 40 acres of right-of-way or other open space. Each park type provides a range of opportunities for active and passive recreation and are described below.

- **Community parks** serve a citywide population and typically include sports facilities, such as lighted fields, tennis and basketball courts, swimming pools, public art, and recreational buildings. They are the City's largest developed parks and include Orange Memorial Park and Westborough Park. These larger parks also support biodiversity and wildlife.
- **Neighborhood parks** serve a smaller portion of the City than community parks and are usually within convenient walking and biking distance from residences. They usually have playgrounds, open turf areas, practice ballfields, public art, and/or picnic tables. They are usually between 1 and 5 acres. Examples include Avalon Park and Brentwood Park. Neighborhood parks also provide the opportunity to maintain patches of wildlife habitat in the City.
- **Mini parks** are small play areas or green spaces. They have limited amenities and are intended to serve immediate neighbors. They may have open turf, playgrounds, sport courts, public art, or picnic tables. They are usually 1 acre or less. Examples includes Cypress and Pine Playlot and Gardiner Park.
- **Linear parks** are trails located along linear geographic features, including watercourses, shorelines, and public utility and transportation right-of-way. They have wider sections that can be used for amenities such as playgrounds, open turf areas, dog parks, benches, public art, and picnic tables. Linear parks are most often used for passive recreation, and often link to trails, other parks, and open spaces. Linear parks and greenways also support wildlife movement and provide connections to open spaces. Examples include the Bay Trail, Sister Cities Park, and Centennial Way from the South San Francisco BART station to the San Bruno BART station.

[18] San Mateo County Parks Department. 2022. County Parks. Website: https://parks.smcgov.org/county-parks. Accessed April 6, 2022.

- **Specialty parks** provide specialized functions. Parks in this category include the Centennial Way Dog Park and the Community Garden.
- **Common green areas** are publicly accessible parkland that feature community playgrounds, benches, open lawn areas, and patios. They are maintained by the City through the Common Green Fund. Owners of properties served by the common greens pay the same tax rate as other property owners, but a portion of their taxes are set aside to the Common Green Fund to maintain common greens areas.
- **Open spaces** are used for passive recreation activities, including walking and hiking. Examples include Sign Hill and areas along the San Francisco Bay.
- **School joint use facilities** are available for public use pursuant to a 2008 Joint Use Agreement between the SSFUSD and the City of South San Francisco. As a result of this agreement, some SSFUSD sports fields, gyms, and other facilities are available for public use. In addition, the City operates licensed before and after school childcare and summer camps at six SSFUSD school sites, which include the use of facilities and playgrounds.
- **BART joint use facilities** include a public access easement along the Centennial Way Trail.
- **Caltrain joint use facilities** include a new Downtown Plaza/westside entry to the Caltrain Station.
- **PG&E joint use facilities** include Irish Town Green which is a grass field with walking paths and benches.
- **SFPUC joint use facilities** include Elkwood Park.

Existing Recreational Facilities

South San Francisco owns and operates a robust and distributed network of recreational facilities. The City maintains 10 indoor recreational facilities and numerous outdoor facilities for sports, social gatherings, camps, and classes. These indoor facilities include the Community Civic Campus (opens 2023), Municipal Services Building (closes 2023), Joseph A. Fernekes Recreation Building, Roberta Cerri Teglia Center (formerly Magnolia Center), Orange Pool, Paradise Valley Recreation Center, Siebecker Center, Terrabay Gymnasium, Alice Peña Bulos Community Center (formerly Westborough Recreation Building), Westborough Preschool, and Community Learning Center, which is jointly operated with the Library. The Municipal Services Building also hosts recreational programming but will be retired after the Community Civic Campus opens. The City also maintains numerous group picnic areas, courts and ballfields, restrooms, and other amenities in parks throughout the City. The City also offers before and after school programs at six SSFUSD elementary schools and is planning for the development of additional preschool sites.

The Community Civic Campus, which is currently under construction, includes a new library, music rooms, exercise and dance rooms, classrooms, and meeting rooms to replace old facilities at the Municipal Services Building and the Main Library. This facility will help to enhance multi-generational use and support a variety of programming needs.

Planned and Proposed Parks

The City has identified locations for planned and proposed parks and open spaces throughout the City, as shown in Exhibit 3.13-4. The proposed parks would be located in the Westborough, Orange Park, Lindenville, and East of 101 planning subareas. Opportunities include:

- **Orange Memorial Park Expansion:** The Orange Memorial Park Master Plan Update is underway and explores the expansion of the park.
- **New linear parks:** Provide trail connections to parks and other trails throughout the City, encouraging active mobility, recreation, and gathering. These include the Railroad Avenue Linear Park (from U.S. Highway 101 [US-101] to East Grand Avenue), Lindenville Linear Park (from Tanforan Avenue to South Maple Avenue), Randolph Avenue Linear Park (from Airport Boulevard to Hillside Boulevard), and more connections to Centennial Way.
- **A transformed Colma Creek:** Co-locate new park and open space features along a new Colma Creek trail to create opportunities for active recreation, social gathering, green infrastructure, and patches for natural habitat.
- **A Downtown park:** Supports a historically underinvested neighborhood with a significant population of young people.
- **New parks East of 101 and Lindenville:** Support new residential neighborhoods.
- **New parks on former school sites:** Work with SSFUSD to develop neighborhood and/or mini parks with the redevelopment of those sites.
- **Skyline open space:** Leverages the 30.5-acre vacant State-owned parcels between King Drive and Westborough Boulevard, east of Skyline Boulevard as a natural open space, trail system, and/or dog park.
- **Terrabay open space:** Maintains open space north of South San Francisco Drive and provides trail connections to San Bruno Mountain.
- **Sunshine Gardens Elementary School joint use facility:** Provides additional park resources in the Sunshine Gardens by means of partnership with SSFUSD at Sunshine Gardens Elementary School and El Camino Real High School.
- **Joint use linear parks and trails:** Provide joint-use parks and trails including the expansion and enhancement of Centennial Way (BART), Colma Creek linear park and trail (San Mateo County Flood and Sea Level Rise Resiliency District), PG&E Corridor Linear Park (from Linden Avenue to Randolph Avenue), PG&E Corridor Linear Park (from Centennial Way Trail to Hillside Boulevard), and the SFPUC Corridor Linear Park (south of Elkwood Park).
- **Other partnership opportunities:** Improve the overall levels of public park access by exploring new and emerging opportunities with SSFUSD, CalWater/SFPUC, BART, Caltrans, Caltrain, PG&E, County of San Mateo, and private companies within the City that maintain green spaces or privately owned public open spaces.

Park Service

Level of service standards are guidelines that define the amount of park and open space necessary to meet the needs of residents. The Quimby Act, a 1965 State law, allows local governments to impose a requirement for the dedication of land or the payment of in-lieu fees, or both, for parks and recreational purposes as a condition of approval of a tentative map or parcel map.[19] The basic premise is that new development brings in more residents and creates a special impact on park and recreation resources. The Quimby Act also contains the specific procedures to calculate, collect, and spend in-lieu fees and requires the return of fees when the fees have not been committed to park and recreational facilities. These fees are distinguished from the Mitigation Fee Act (California Government Code section 66000 et seq.). The Quimby Act also sets the maximum community per-capita standard for park and recreational facilities of 5 acres per 1,000 population for which park and recreational land dedication and fees may be imposed under the Act. The fees collected through the Quimby regulations offset the developmental impacts by providing park and recreational facilities to serve new residents. Table 3.13-6 provides the park service standards and current ratios in South San Francisco.

Table 3.13-6: Park Service Standards and Current Service Ratios

Type of Park	Standard (Acres Per 1,000 Residents)	Current Service Ratio (Acres Per 1,000 Residents)
Improved Parkland	3.0	2.4
Open Space	1.5	1.2
Joint Use Facilities	1.0	1.0
All Parks and Open Space Areas	5.5	4.8
Source: City of South San Francisco. 2022. Shape SSF. Abundant and Accessible Parks and Recreation Element. Website: https://shapessf.com/abundant-accesible-parks-recreation/. Accessed April 11, 2022.		

Community Civic Campus

As previously stated, the City Council approved the schematic design of a new civic center complex in June 2019. Phase 2 will include a theater/City Council chamber, 1.3-acre park, and combined facility shared by the Library and Parks and Recreation departments to be located along El Camino Real between Chestnut Avenue and Arroyo Drive, which broke ground in January 2021 and is currently under construction. The Library and Parks and Recreation facility will include music rooms, exercise and dance rooms, classrooms, and meeting rooms, and will meet many of the recreation needs identified in the Parks and Recreation Master Plan.[20]

[19] See Government Code §66477 et seq.

[20] City of South San Francisco. 2021. Community Civic Campus Program. Website: http://www.communityciviccampus.net/. Accessed April 6, 2022.

3.13.3 - Regulatory Framework

Federal

No federal plans, policies, regulations, or laws related to public services and recreation are applicable to the proposed project.

State

California Fire Code and California Building Code

The International Fire Code and the International Building Code, established by the International Code Council (ICC) and amended by the State of California, prescribe performance characteristics and materials to be used to achieve acceptable levels of fire protection.

California Health and Safety Code

California Health and Safety Code, Sections 13100–13135, establish the following policies related to fire protection:

- **Section 13100.1:** The functions of the office of the State Fire Marshall, including CAL FIRE, shall be to foster, promote, and develop strategies to protect life and property against fire and panic.
- **Section 13104.6:** The Fire Marshall has the authority to require fire hazards to be removed in accordance with the law relating to removal or public nuisances on tax-deeded property.

California Senate Bill 50

Senate Bill (SB) 50 (funded by Proposition 1A, approved in 1998) limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development, and provides instead for a standardized developer fee. SB 50 generally provides for a 50/50 State and local school facilities funding match. SB 50 also provides for three levels of statutory impact fees. The application level depends on whether State funding is available, whether the school district is eligible for State funding, and whether the school district meets certain additional criteria involving bonding capacity, year-round school, and percentage of movable classrooms in use.

California Government Code, Section 65995(b) and Education Code, Section 17620

SB 50 amended Section 65995 of the California Government Code, which contains limitations on Section 17620 of the Education Code, the statute that authorizes school districts to assess development fees within school district boundaries. Section 65995(b)(3) of the Government Code requires the maximum square footage assessment for development to be increased every 2 years, according to inflation adjustments. On January 22, 2014, the State approved increasing the allowable amount of statutory school facilities fees (Level I School Fees) from $3.20 to $3.36 per square foot of assessable space for residential development of 500 square feet or more, and from $0.51 to $0.54 per square foot of chargeable covered and enclosed space for commercial/industrial development. School districts may levy higher fees if they apply to the State and meet certain conditions.

Quimby Act

The Quimby Act (California Government Code § 66477) was established by the California Legislature in 1965 to preserve open space and parkland in rapidly urbanizing areas of the State. The Quimby Act allows cities and counties to establish requirements for new development to dedicate land for parks, pay an in-lieu fee, or provide a combination of the two.

The Quimby Act provides two standards for the dedication of land for use as parkland. If the existing area of parkland in a community is greater than 3 acres per 1,000 residents, then the community may require dedication based on a standard of up to 5 acres per 1,000 persons residing in the subdivision based on the current ratio of parkland per 1,000 residents. If the existing amount of parkland in a community is less than 3 acres per 1,000 residents, then the community may require dedication based on a standard of only 3 acres per 1,000 persons residing in the subdivision.

It should be noted that the Quimby Act applies only to the acquisition of new parkland; it does not apply to the physical development of new park facilities or associated operations and maintenance costs. Therefore, the Quimby Act effectively preserves open space needed to develop park and recreation facilities, but it does not ensure the development of the land or the provision of park and recreation services to residents. In addition, the Quimby Act applies only to residential subdivisions. Nonresidential projects could contribute to the demand for park and recreation facilities without providing land or funding for such facilities. Quimby Act fees are collected by the local agency (park district, city, or county) in which the new residential development is located.

Local

South San Francisco General Plan Update

The General Plan Update proposes the following policies and actions that assist in reducing or avoiding impacts related to public services and recreation:

Subareas Element

Policy SA-16.3 Create new parks and open spaces in East of 101. Introduce a new, connected park and open space system that includes:

- A public park within a ten-minute walk to any new residential development East of 101.
- A Colma Creek linear park featuring walking and cycling paths.
- A recreational greenway between Airport Boulevard and Littlefield Avenue.

Policy SA-16.4 Adequate public services in East of 101. Coordinate with the South San Francisco Unified School District and public services, including the South San Francisco Fire Department and the South San Francisco Police Department, to ensure public services can accommodate growth impacts of new development in the East of 101 area.

Policy SA-22.7 Adequate public services in Lindenville. Coordinate with the South San Francisco Unified School District and City public services, including the Fire Department and

the Police Department, to ensure public services can accommodate growth impacts of this new development in Lindenville.

Action SA-31.1.1 Coordinate with Cal Water to purchase or lease land. Coordinate with Cal Water to purchase or lease land along Chestnut Avenue and Colma Creek to expand Orange Park.

Policy SA-31.2 Improve Centennial Way Trail Connections to Orange Park. Improve pedestrian and bicycle connections to the Centennial Way Trail, and to the El Camino Real and Downtown subareas.

Action SA-32.4.1 Coordinate with local and regional open space agencies. Collaborate with County of San Mateo Parks Department regarding upkeep and expansion of pedestrian facilities to connect to the San Bruno Mountains.

Policy SA-35.4 Collaborate with SSFUSD to provide access to SSFUSD sites recreational facilities. Collaborate more closely with the South San Francisco Unified School District to make recreational facilities at El Camino High and Sunshine Gardens Elementary School more accessible to the community.

Policy SA-36.4 Expand parks and walking trails in Westborough. Expand access to parks and active transportation opportunities in Westborough.

Policy SA-38.1 Explore housing development and open space on Serra Vista school site. Work with the South San Francisco Unified School District to evaluate a medium-density housing development and a publicly accessible open space on the former Serra Vista school site.

Action SA-39.1.1 Implement linear parks in Winston Serra. Develop a new linear park as outlined in the Parks and Recreation Master Plan.

Action SA-39.1.2 Develop new park at SFPUC site. Develop a new park on the existing SFPUC site that provides pedestrian connections to Alta Loma Middle School.

Policy SA-39.2 Collaborate with SSFUSD to provide access to Buri Elementary recreational facilities. Collaborate more closely with the South San Francisco Unified School District to make recreational facilities at Buri Buri Elementary School more accessible to the community.

Land Use and Community Design Element

Policy LU-1.4 Maintain and expand public facilities and services. Maintain and expand public facilities to better support the community, including schools, libraries, utilities, and recreational spaces, particularly in neighborhoods lacking these resources. Seek opportunities to co-locate new public projects near compatible civic uses such as schools and campuses to create nodes of activity and services.

Policy LU-1.6 Promote Childcare and pre-K facilities. Promote childcare and pre-K facilities in South San Francisco.

Action LU-1.6.1 Zone for Childcare and pre-K. Revise the Zoning Ordinance to allow childcare and pre-K facilities throughout the City.

Action LU-1.6.2 Fund and expand childcare and pre-K. Coordinate with public institutions, including San Mateo County, and seek State, federal, and private funding sources to maximize resources to fund and expand childcare, including after school care, and pre-K in South San Francisco.

Equitable Community Services Element

Policy ECS-5.1 Develop partnerships for education. Develop formalized partnerships with local businesses and non-profit organizations to support South San Francisco Unified School District students.

Policy ECS-5.2 Provide a variety of youth programming. Provide a variety of programming to ensure all children and youth in South San Francisco have educational and recreational opportunities.

Policy ECS-5.3 Maintain a data sharing agreement with South San Francisco Unified School District. Maintain a continuous exchange of information with the South San Francisco Unified School District on projected growth of the City.

Action ECS-6.1.1 Maintain community fire stations. Maintain equitable distribution of Fire Stations so that each neighborhood is equally and adequately served.

Action ECS-6.1.2 Establish Community Safety and Equity Advisory Board. Establish a Community Safety and Equity Advisory Board to review data, provide recommendations, and build trust. The Board may make recommendations related to public safety or to any equity issue throughout City departments and programs.

Action ECS-6.1.3 Strengthen community cohesion through engagement with Police and Fire. Strengthen community cohesion through community engagement efforts to build cross-cultural trust between the Police and Fire Departments and residents of color and low-income residents.

Policy ECS-7.1 Ensure adequate library services, staffing, and facilities. Ensure adequate library services, staffing, and facilities are maintained for all residents.

Policy ECS-7.7 Conduct regular evaluation of library services. Develop customer service surveys to use to evaluate library programs and events.

Abundant and Accessible Parks and Recreation Element

Policy PR-1.2 Strive to have all residents within a 10-minute walk access to parks. Strive to have all residents within a 10-minute walk of an improved park.

Policy PR-1.5 Use underutilized spaces for recreational services. Seek opportunities to use vacant and underutilized commercial and industrial buildings for recreational services, especially in disadvantaged communities.

Policy PR-1.4 Ensure equitable distribution of park and recreation opportunities. Ensure accessible public facilities and services are equitably distributed throughout the City and are provided in a timely manner to keep pace with new development.

Policy PR-2.1 Meet improved parkland standard. Maintain an interconnected system of community, neighborhood, mini, linear, and special use parks that achieves a standard of 3.0 acres of improved parkland per 1,000 residents.

Policy PR-2.2 Use underutilized sites for improved parks. Add improved parkland by improving existing underused sites, such as surface parking lots, to create new green space, recreation, and gathering areas in the parks system. Consider using sites as temporary/popup parks to meet near term needs.

Policy PR-3.1 Meet open space standard: Maintain a network of open spaces that achieves a standard of 1.5 acres of open space per 1,000 residents, preserving and seeking opportunities to expand open spaces areas like Sign Hill, along the San Francisco Bay and Colma Creek, and in other areas identified on Figure 31, while ensuring open spaces are accessible to people of all ages and abilities and support urban ecology.

Policy PR-3.3 Create new public access points to open spaces. Seek opportunities to create new public access points to Sign Hill, San Bruno Mountain State and County Park, and the San Francisco Bay Trail and parks.

Policy PR-4.1 Maintain joint use facilities standard. To complement and extend City park and recreational service delivery, maintain a service target of 1.0 acres of joint use facilities per 1,000 residents.

Policy PR-4.6 Convert public easements. Work with other agencies, including PG&E, the California Water Service, San Francisco Public Utilities Commission, and to convert public easements, such as utility corridors or unused rights of way, into parks and trails.

Policy PR-4.7 Provide publicly accessible, private open space. Work with nonresidential development projects in the East of 101, Lindenville, and El Camino subareas to provide publicly accessible private maintained open space as part of a developer agreement, Memorandum of Understanding, or similar legally binding agreement with the City. Establish standards for private parks so that their quality is on par with public parks. Require the identification of an entity responsible for park maintenance, adoption of maintenance standards and guarantees of a funding source for long-term maintenance.

Policy PR-5.2 Expand Downtown park acquisition opportunities. Seek opportunities to acquire property, including former Redevelopment Agency sites, utility right-of-way, and other vacant and underutilized properties to convert into parkland in Downtown.

Policy PR-6.1 Maintain and expand trail connectivity. Maintain and expand an interconnected network of trails, greenways, and active transportation.

Policy PR-7.2 Maintain park and recreation facilities. Fund adequate resources to maintain existing and future parks and recreational facilities to extend their useful lifetimes.

Policy PR-7.3 Maintain park amenities. Maintain high quality amenities for active and passive recreational use in parks, including playgrounds, fields, and sport courts, and suitability of use by younger children, including childcare provider groups.

Policy PR-7.4 Upgrade playgrounds. Continue to renovate existing playgrounds to update play features and add play elements to existing open spaces where feasible.

Policy PR-7.5 Redesign underused parks. Continue to redesign underused parks to update programming to attract more users where feasible.

Policy PR-7.6 Modernize aquatics facilities. Seek opportunities to replace and expand the indoor pool at Orange Park to continue to provide benefits from aquatics programming.

City of South San Francisco Municipal Code

Chapter 8.67 Parks and Recreation Impact Fee

As stated in Chapter 8.67 of the Municipal Code, the specific purpose of the parkland acquisition fee is to mitigate the impact of development projects by collecting sufficient funds to acquire property in the City and provide 3 acres of parkland per 1,000 residents and 0.5 acre of parkland per 1,000 new employees. Further, the specific purpose of the park construction fee is to mitigate the impact of development projects on park facilities by collecting sufficient funds to construct adequate park facilities and improvements in the City, refurbish and expand existing facilities to maintain existing levels of service, and provide 3 acres of improved parkland per 1,000 residents and one-half acre of improved parkland per 1,000 new employees.

Chapter 8.74 Library Impact Fee

As stated in Chapter 8.74 of the Municipal Code, the purpose of the library impact fee is to finance these facilities and collection, which benefit development, and for each new development to pay its fair and proportional share of these improvements. Specifically, the purposes of the fee would be to expand and/or remodel existing library branches, acquire additional space or repurpose current spaces to address emerging community needs, bolster the library collection in diverse electronic and hard copy formats, and replace and upgrade furniture, fixtures, technology, and equipment to continue to meet the existing service level standard of the community.

Chapter 8.75 Public Safety Impact Fee

As stated in Chapter 8.75 of the Municipal Code, the purpose of the public safety impact fee is to provide funding for adequate police and fire equipment, vehicles, and facilities to meet the broad range of needs of South San Francisco residents and employees, as established in the General Plan.

Chapter 15.24 California Fire Code

Chapter 15.24 of the Municipal Code implements the California Fire Code on a local level with certain local amendments.

City of South San Francisco Zoning Ordinance

The following chapters of the South San Francisco Zoning Ordinance, including the new or revised chapters of the Zoning Ordinance that are part of the proposed project, assist in reducing or avoiding impacts related to public services and recreation.

Chapter 20.180 Flood Plain/Sea Level Rise (SLR) Overlay (new)

Section 20.180.004 (Uses) (new) prohibits fire stations and schools from being located within the Flood Plain/Sea Level Rise Overlay District.

Chapter 20.300 Lot and Development Standards (revised)

Section 20.300.009 (Performance Standards) (revised) establishes regulations related to fire and explosive hazards. Land or buildings shall not be used or occupied in a manner creating any dangerous, injurious, or noxious fire, explosive, or other hazard which would adversely affect the surrounding area. All activities, processes, and uses involving the use of, or storage of, flammable and explosive materials shall be provided with adequate safety devices against the hazard of fire and explosion. Firefighting and fire suppression equipment and devices standard in industry shall be approved by the Fire Department. All incineration is prohibited with the exception of those substances, including chemicals, insecticides, hospital materials, and waste products, required by law to be disposed of by burning and those instances wherein the Fire Department deems it a practical necessity.

Section 20.00.010 (Projections into Required Yards) (revised) states that fire escapes, required by law, ordinance, or standards of a public agency, may project up to four feet into any required yard.

Chapter 20.350 Standards and Requirements for Specific Uses and Activities (revised)

The purpose of this chapter is to establish standards for specific uses and activities that are permitted or conditionally permitted in several or all districts. These provisions are supplemental standards and requirements to minimize the effect of these uses and activities on surrounding properties and to protect the health, safety, and welfare of their occupants and of the general public.

The standards related to fire prevention and safety include establishing setbacks from fire hydrants, fire lanes, and fire access ways, using fire-treated umbrellas, canopies, or other shade elements for outdoor dining areas, and providing fire walls to separate every 3,000 square feet within any personal storage structure. For large recycling facilities, storage containers for flammable material shall be constructed of nonflammable material and approved by the Fire Department and oil storage must be in containers approved by the Fire Department and Health Official. Lastly, Social Service

Facilities must provide evidence of compliance with all Building and Fire Safety regulations and any other measures determined by the Review Authority to be necessary and appropriate to ensure compatibility of the proposed use or uses with the surrounding area.

Section 20.350.029 (Other Financial Services) (new) requires that a security plan be provided for review and approval by the Chief Planner and the City of South San Francisco Police Department for other financial services, which includes alternative loan businesses and pawnbrokers. The plan shall provide for adequate security, including a central station alarm system to the Police Department. Bars on the windows, exterior phones, and roll up doors are prohibited.

Chapter 20.360 Signs (revised)

Section 20.360.004 (General Standards for All Signs) (revised) prohibits the placement of any sign on a fire hydrant or in a manner that would prevent or inhibit free ingress to or egress from any door, window, vent, or any exit way required by the Building Code or by Fire Department regulations (currently in effect).

Chapter 20.490 Use Permits (revised)

Section 20.490.005 (Conditions of Approval) (revised) allows the Chief Planner to impose conditions related to fire and police protection in approving a temporary use permit. For example, fire protection and access for fire vehicles as well as fencing or other security measures (as deemed necessary by the Police Department) may be required.

3.13.4 - Methodology

This analysis identifies potential impacts to fire protection, police protection, schools, libraries, other public facilities, parks, and recreational facilities based on development anticipated from the proposed project (collectively, the General Plan Update, Zoning Code Amendments, and Climate Action Plan). Impacts to public services, parks, and recreational facilities were assessed using the significance criteria established by the California Environmental Quality Act (CEQA) Guidelines, as well as State, and local plans, regulations, and ordinances.

The provision of recreational facilities and ability to fund their installation and maintenance is provided for at a statewide level under the Quimby Act, a regulation allowing cities to require dedication of land or payment of fees for parks and recreation as a condition of tentative or parcel map approval.

3.13.5 - Thresholds of Significance

According to the CEQA Guidelines Appendix G Environmental Checklist, to determine whether impacts related to public services are significant environmental effects, the following question is analyzed and evaluated. Would the project:

> Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant

environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

a) Fire protection
b) Police protection
c) Schools
d) Other public facilities

Would the project:

a) 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?
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

3.13.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the proposed project and provides mitigation measures where appropriate.

Need for New or Altered Fire Protection Facilities

Impact PUB-1:	**The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, need for new or physically altered fire protection 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.**

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. The majority of potential growth would occur within the East of 101, Lindenville, Downtown, and El Camino planning subareas (Chapter 2, Project Description, Exhibit 2-5). The majority of potential growth would be located within the response areas for Fire Stations 61, 62, and 63 (Exhibit 3.13-1). Additionally, the proposed project may result in other private and public improvements throughout the City with the potential for environmental effects related to fire protection facilities (see Sections 2.5.2, 2.5.5, and 2.5.6, Chapter 2, Project Description).

As described in Chapter 2, Project Description, the proposed project anticipates approximately 14,312 net new housing units and approximately 42,297 net new employment opportunities by 2040. This new growth would increase the City's population by approximately 40,068. Development and growth in the City would increase demand for fire protection services. As the demand for fire protection services increases, there may be a need to increase staffing and equipment to maintain acceptable service ratios, response times, and other performance standards. However, this would require existing fire stations to be able to accommodate the additional staff and/or equipment. If an existing fire station is at capacity for staffing, this could require an expansion of an existing fire

station or construction of a new fire station, the construction of which could cause environmental impacts.

The General Plan Update includes policies and actions to ensure that fire protection services keep pace with new development. Policy SA-16.4 requires the City to coordinate with the SSFFD to ensure public services can accommodate growth impacts of new development in the East of 101 area. Policy SA-22.7 requires the City to coordinate with the SSFFD to ensure public services can accommodate growth impacts of new development in Lindenville. Action ECS-6.1.1 requires the City to maintain an equitable distribution of Fire Stations so that each neighborhood is equally and adequately served. There are no actions identified in the Climate Action Plan related to fire protection services.

The South San Francisco Municipal Code contains rules and regulations related to fire protection services. Chapter 8.75 of the Municipal Code requires that all residential and nonresidential development projects pay public safety impact fees to provide funding for adequate fire equipment, vehicles, and facilities to meet the broad range of needs of South San Francisco residents and employees. Chapter 15.24 of the Municipal Code implements the California Fire Code on a local level. In accordance with Chapter 15.24, new development projects must meet fire protection and emergency access requirements. In addition, new development projects are required to install fire sprinklers, fire alarms, and fire extinguishers that are up to current code and appropriately located within proposed buildings or structures.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, includes rules and regulations related to fire protection services. Section 20.300.009 (Performance Standards) (revised) requires that land or buildings shall not be used or occupied in a manner creating any dangerous, injurious, or noxious fire, explosive, or other hazard which would adversely affect the surrounding area. All activities, processes, and uses involving the use of, or storage of, flammable and explosive materials shall be provided with adequate safety devices against the hazard of fire and explosion. Firefighting and fire suppression equipment and devices standard in industry shall be approved by the Fire Department. All incineration is prohibited with the exception of those substances, including chemicals, insecticides, hospital materials, and waste products, required by law to be disposed of by burning and those instances wherein the Fire Department deems it a practical necessity. Chapter 20.350 Standards and Requirements for Specific Uses and Activities (revised) requires setbacks from fire hydrants, fire lanes, and fire access ways, the use of fire-treated umbrellas, canopies, or other shade elements for outdoor dining areas, and provision of fire walls to separate every 3,000 square feet within any personal storage structure. For large recycling facilities, storage containers for flammable material shall be constructed of nonflammable material and approved by the Fire Department and oil storage must be in containers approved by the Fire Department and Health Official. Section 20.360.004 (General Standards for All Signs) (revised) prohibits the placement of any sign on a fire hydrant or in a manner that would prevent or inhibit free ingress to or egress from any door, window, vent, or any exit way required by the Building Code or by Fire Department regulations (currently in effect). Section 20.490.005 (Conditions of Approval) (revised) allows the Chief Planner to impose conditions related to fire protection in approving a temporary use permit. For example, fire protection and access for fire vehicles may be required. Collectively, these rules and regulations minimize fire risk and allow for emergency access in the event of a fire.

The project-specific environmental impacts of constructing new or expanded fire protection facilities to support the growth anticipated under the proposed project cannot be determined at this time because the site-specific locations and designs of future new or expanded facilities are not known. However, fire protection facilities are allowed within the "Public" land use designation as shown on the proposed land use map (Exhibit 2-4) and are contemplated as part of the proposed project. As shown on Table 2-7 in Chapter 2, Project Description, buildout under the proposed project could result in approximately 68,367 square feet of nonresidential uses under the "Public" land use designation, which could include fire protection facilities. It can be expected that construction and operation of future new or expanded fire protection facilities would have similar impacts as would construction and operation of other types of new development under the proposed project. As the City proceeds with the construction of new or expanded fire protection facilities, those projects will be reviewed by the City for compliance with the policies and actions of the General Plan Update, the City's Municipal Code, and the mitigation measures referenced in other sections of this Draft Program EIR. Therefore, the physical effects on the environment from the construction of new or expanded fire protection facilities would be less than significant.

Furthermore, as the City receives development applications for subsequent development under the proposed project, those applications will be reviewed by the City of South San Francisco for compliance with the policies and actions of the General Plan Update to ensure that fire protection services keep pace with new development. In addition, the City's Municipal Code, which implements the City's General Plan would be reviewed when development applications are received, including Chapter 8.75, Public Safety Impact Fee, and Chapter 15.24, California Fire Code. Therefore, future development under the proposed project would not result in significant adverse effects related to fire protection services and impacts would be less than significant.

Level of Significance

Less than significant impact.

Need for New or Altered Police Protection Facilities

Impact PUB-2:	**The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection.**

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. The majority of potential growth would occur within the East of 101, Lindenville, Downtown, and El Camino planning subareas (Chapter 2, Project Description, Exhibit 2-5). Additionally, the proposed project may result in other private and public improvements throughout the City with the potential for environmental effects related to police protection facilities (see Sections 2.5.2, 2.5.5, and 2.5.6, Chapter 2, Project Description).

As described in Chapter 2, Project Description, the proposed project anticipates approximately 14,312 net new housing units and approximately 42,297 net new employment opportunities by

2040. This new growth would increase the City's population by approximately 40,068. Development and growth in the City would increase demand for police protection services. As the demand for police services increases, there may be a need to increase staffing and equipment to maintain acceptable service ratios, response times, and other performance standards. However, this would require existing police stations to be able to accommodate the additional staff and/or equipment. If an existing police station is at capacity for staffing, this could require an expansion of an existing police station or construction of a new police station, the construction of which could cause environmental impacts.

The General Plan Update includes policies and actions to ensure that police protection services keep pace with new development. Policy SA-16.4 requires the City to coordinate with the SSFPD to ensure public services can accommodate growth impacts of new development in the East of 101 area. Policy SA-22.7 requires the City to coordinate with the SSFPD to ensure public services can accommodate growth impacts of new development in Lindenville. Action ECS-6.1.2 requires the City to establish a Community Safety and Equity Advisory Board to review data, provide recommendations, build trust, and make recommendations related to public safety or to any equity issue throughout City departments and programs. This Board was established on February 9, 2022. Action ECS-6.1.3 requires the City to strengthen community cohesion through community engagement efforts to build cross-cultural trust between the Police and Fire Departments and residents of color and low-income residents. There are no actions identified in the Climate Action Plan related to police protection services.

The South San Francisco Municipal Code contains rules and regulations related to police protection services. For example, Chapter 8.75 of the Municipal Code requires that all residential and nonresidential development projects pay public safety impact fees to provide funding for adequate police equipment, vehicles, and facilities to meet the broad range of needs of South San Francisco residents and employees.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, include rules and regulations related to police protection services. Section 20.350.029 (Other Financial Services) (new) requires that a security plan be provided for review and approval by the Chief Planner and the City of South San Francisco Police Department for other financial services, which includes alternative loan businesses and pawnbrokers. The plan shall provide for adequate security, including a central station alarm system to the Police Department. Bars on the windows, exterior phones, and roll-up doors are prohibited. Section 20.490.005 (Conditions of Approval) (revised) allows the Chief Planner to impose conditions related to police protection in approving a temporary use permit. For example, fencing or other security measures (as deemed necessary by the Police Department) may be required.

The project-specific environmental impacts of constructing new or expanded police protection facilities to support the growth anticipated under the proposed project cannot be determined at this time because the site-specific locations and designs of future new or expanded facilities are not known. However, police protection facilities are allowed within the "Public" land use designation as shown on the proposed land use map (Exhibit 2-4) and are contemplated as part of the proposed project. As shown on Table 2-7 in Chapter 2, Project Description, buildout under the proposed

project could result in approximately 68,367 square feet of nonresidential uses under the "Public" land use designation, which could include police protection facilities. It can be expected that construction and operation of future new or expanded police protection facilities would have similar impacts as would construction and operation of other types of new development under the proposed project. As the City proceeds with the construction of new or expanded police protection facilities, those projects will be reviewed by the City for compliance with the policies and actions of the General Plan Update, the City's Municipal Code, and the mitigation measures referenced in other sections of this Draft Program EIR. Therefore, the physical effects on the environment from the construction of new or expanded police protection facilities would be less than significant.

Furthermore, as the City receives development applications for subsequent development under the proposed project, those applications will be reviewed by the City for compliance with the policies and actions of the General Plan Update to ensure that police protection services keep pace with new development. In addition, the City's Municipal Code, which implements the City's General Plan would be reviewed when development applications are received, including Chapter 8.75, Public Safety Impact Fee. Therefore, future development under the proposed project would not result in significant adverse effects related to police protection services and impacts would be less than significant.

Level of Significance

Less than significant impact.

Need for New or Altered School Facilities

Impact PUB-3:	**The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for schools.**

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. The majority of potential growth would occur within the East of 101, Lindenville, Downtown, and El Camino planning subareas (Chapter 2, Project Description, Exhibit 2-5), all of which are located within the SSFUSD. As described in Chapter 2, Project Description, the proposed project anticipates approximately 14,312 net new housing units and approximately 42,297 net new employment opportunities by 2040. This new growth would increase the City's population by approximately 40,068. Development and growth in the City would increase demand for school facilities. However, schools within the SSFUSD are operating at approximately 65.7 percent of capacity.[21] Therefore, as the demand for school services increases from buildout of the proposed project, existing school facilities would be able to accommodate the additional students in existing facilities. As student enrollment increases, there would be an incremental increase in staffing and equipment needed to maintain acceptable service ratios and

[21] Langley, Jessen. Student Services, South San Francisco Unified School District (SSFUSD). Personal communication: telephone. March 7, 2022.

other performance objectives for schools. However, the incremental increase in staffing and equipment would not result in significant environmental impacts.

The General Plan Update includes policies and actions to ensure that school facilities keep pace with new development. Policy SA-16.4 requires the City to coordinate with the SSFUSD to ensure public services can accommodate growth impacts of new development in the East of 101 area. Policy SA-22.7 requires the City to coordinate with the SSFUSD to ensure public services can accommodate growth impacts of new development in Lindenville. Policy LU-1.4 requires the City to maintain and expand public facilities to better support the community, including schools, particularly in neighborhoods lacking these resources. Policy LU-1.6 requires the City to promote childcare and pre-K facilities in South San Francisco. Policy ECS-5.3 requires the City to maintain a continuous exchange of information with the SSFUSD on projected growth of the City. There are no regulations identified in the Zoning Code Amendments and no actions identified in the Climate Action Plan related to school facilities.

Furthermore, as the City receives development applications for subsequent development under the proposed project, those applications will be reviewed by the City of South San Francisco for compliance with the policies and actions of the General Plan Update to ensure that school facilities keep pace with new development. In addition, the City's Municipal Code, which implements the City's General Plan would be reviewed when development applications are received, including payment of school impact fees per SB 50. Therefore, future development under the proposed project would not result in significant adverse effects related to school facilities and impacts would be less than significant.

Level of Significance

Less than significant impact.

Need for New or Altered Library Facilities

Impact PUB-4:	**The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered library facilities, need for new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for library facilities.**

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. The majority of potential growth would occur within the East of 101, Lindenville, Downtown, and El Camino planning subareas (Chapter 2, Project Description, Exhibit 2-5), with the majority of residential uses located within 1 mile of an existing or new library (Community Civic Campus). As described in Chapter 2, Project Description, the proposed project anticipates approximately 14,312 net new housing units and approximately 42,297 net new employment opportunities by 2040. This new growth would increase the City's population by approximately 40,068. Development and growth in the City would increase demand for library facilities. Although the new library at the Community Civic Campus can accommodate some of the increase in demand for library services from buildout of the proposed project, there may be an additional need to increase staffing and equipment to maintain acceptable service ratios and other

performance objectives for library facilities. However, this would require existing library facilities to be able to accommodate the additional staff and/or equipment. If an existing library is at capacity for staffing, this could require an expansion of an existing library or construction of a new library, the construction of which could cause environmental impacts.

The General Plan Update includes policies and actions to ensure that library facilities keep pace with new development. Policy LU-1.4 requires the City to maintain and expand public facilities to better support the community, including libraries, particularly in neighborhoods lacking these resources. Policy ECS-7.1 requires the City to ensure adequate library services, staffing, and facilities are maintained for all residents. Policy ECS-7.7 requires the City to develop customer service surveys to use to evaluate library programs and events. There are no regulations identified in the Zoning Code Amendments and no actions identified in the Climate Action Plan related to library services.

The South San Francisco Municipal Code contains rules and regulations related to library facilities. For example, Chapter 8.74 of the Municipal Code, establishes a library impact fee to finance library facilities and collections, which benefit development, and for each new development to pay its fair and proportional share of these improvements. Specifically, the purposes of the fee would be to expand and/or remodel existing library branches, acquire additional space or repurpose current spaces to address emerging community needs, bolster the library collection in diverse electronic and hard copy formats, and replace and upgrade furniture, fixtures, technology, and equipment to continue to meet the existing service level standard of the community.

The project-specific environmental impacts of constructing new or expanded library facilities to support the growth anticipated under the proposed project cannot be determined at this time because the site-specific locations and designs of future new or expanded facilities are not known. However, library facilities are allowed within the “Public” land use designation as shown on the proposed land use map (Exhibit 2-4) and are contemplated as part of the proposed project. As shown on Table 2-7 in Chapter 2, Project Description, buildout under the proposed project could result in approximately 68,367 square feet of nonresidential uses under the “Public” land use designation, which could include library facilities. It can be expected that construction and operation of future new or expanded library facilities would have similar impacts as would construction and operation of other types of new development under the proposed project. As the City proceeds with the construction of new or expanded library facilities, those projects will be reviewed by the City for compliance with the policies and actions of the General Plan Update, the City’s Municipal Code, and the mitigation measures referenced in other sections of this Draft Program EIR. Therefore, the physical effects on the environment from the construction of new or expanded library facilities would be less than significant.

Furthermore, as the City receives development applications for subsequent development under the proposed project, those applications will be reviewed by the City of South San Francisco for compliance with the policies and actions of the General Plan Update to ensure that library facilities keep pace with new development. In addition, development facilitated by the proposed project would be required to pay library impact fees in accordance with Chapter 8.74 of the Municipal Code. Therefore, future development under the proposed project would not result in significant adverse effects related to library facilities and impacts would be less than significant.

Level of Significance

Less than significant impact.

Need for New or Altered Other Public Facilities

Impact PUB-5:	**The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered other public facilities, need for new or physically altered other public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for other public facilities.**

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. As described in Chapter 2, Project Description, the proposed project anticipates approximately 14,312 net new housing units and approximately 42,297 net new employment opportunities by 2040. This new growth would increase the City's population by approximately 40,068. Development and growth in the City would increase demand for other public facilities. As demand for other public facilities increases from implementation of the proposed project, there may be an additional need to increase staffing and equipment to maintain acceptable service ratios and other performance objectives for these other public facilities. However, this would require existing public facilities to be able to accommodate the additional staff and/or equipment. If an existing public facility is at capacity for staffing, this could require an expansion of an existing public facility or construction of a new public facility, the construction of which could cause environmental impacts.

The project-specific environmental impacts of constructing new or expanded other public facilities to support the growth anticipated under the proposed project cannot be determined at this time because the site-specific locations and designs of future new or expanded facilities are not known. However, public facilities are allowed within the "Public" land use designation as shown on the proposed land use map (Exhibit 2-4) and are contemplated as part of the proposed project. As shown on Table 2-7 in Chapter 2, Project Description, buildout under the proposed project could result in approximately 68,367 square feet of nonresidential uses under the "Public" land use designation, which could include other public facilities. It can be expected that construction and operation of future new or expanded public facilities would have similar impacts as would construction and operation of other types of new development under the proposed project. As the City proceeds with the construction of new or expanded public facilities, those projects will be reviewed by the City for compliance with the policies and actions of the General Plan Update, the City's Municipal Code, and the mitigation measures referenced in other sections of this Draft Program EIR. Therefore, the physical effects on the environment from the construction of new or expanded other public facilities would be less than significant, and future development under the proposed project would not result in significant adverse effects related to other public facilities and impacts would be less than significant.

Level of Significance

Less than significant impact.

Effects of Increased Use of Existing Parks

Impact REC-1: 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.

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. The majority of potential growth would occur within the East of 101, Lindenville, Downtown, and El Camino planning subareas (Chapter 2, Project Description, Exhibit 2-5), with the majority of residential uses located within 0.75 mile of an existing or proposed new park or recreational facility (Exhibits 3.13-3 and 3.13-4). As described in Chapter 2, Project Description, the proposed project anticipates approximately 14,312 net new housing units and approximately 42,297 net new employment opportunities by 2040. This new growth would increase the City's population by approximately 40,068, for a total of approximately 107,203 persons by 2040. Development and growth in the City would increase demand for parks and recreational facilities. As the demand for parks and recreational facilities increases, there may be a need to increase staffing and other resources to maintain existing parks and recreational facilities from their increased use. Additionally, as the demand for parks and recreational facilities increases, there may be a need to expand existing parks and recreational facilities or construct new parks and recreational facilities to maintain acceptable service ratios. The environmental impacts from the construction of new parks and recreational facilities are discussed under Impact REC-2.

Collectively, the City maintains a park service standard of 5.5 acres of all park and open space types per 1,000 residents, consistent with the California Quimby Act. Based on the City's projected population of 107,203 by 2040, an additional 274 acres of park and open space would be needed by 2040 to achieve the service standard of 5.5 acres of parkland per 1,000 residents.

The proposed project includes new parks and recreational facilities to assist the City in meeting the park service standards (Exhibits 2-4 and 3.13-4). Additionally, the General Plan Update includes policies and actions to ensure that parks and recreational facilities keep pace with new development. Policy SA-16.3 requires the City to create new parks and open spaces in East of 101, including a public park within a ten-minute walk to any new residential development East of 101, a Colma Creek linear park featuring walking and cycling paths, and a recreational greenway between South Airport Boulevard and Littlefield Avenue Action SA-31.1.1 requires the City to coordinate with Cal Water to purchase or lease land along Chestnut Avenue and Colma Creek to expand Orange Park. Policy PR-1.5 requires the City to seek opportunities to use vacant and underutilized commercial and industrial buildings for recreational services, especially in disadvantaged communities. Policy PR-1.4 requires the City to ensure accessible public facilities and services are equitably distributed throughout the City and are provided in a timely manner to keep pace with new development. Policy PR-3.3 requires the City to create new public access points to Sign Hill, San Bruno Mountain State and County Park, and the San Francisco Bay Trail and parks. Policy PR-4.6 requires the City to work with other agencies, including PG&E, California Water Service, and SFPUC to convert public easements, such as utility corridors or unused rights of way, into parks and trails. Lastly, Policy PR-5.2 requires the City to seek opportunities to acquire property, including former Redevelopment Agency sites, utility right-of-way, and other vacant and underutilized properties to convert into parkland in

the Downtown sub-area. There are no policies identified in the Zoning Code Amendments and no actions identified in the Climate Action Plan related to the use of parks and recreational facilities.

The South San Francisco Municipal Code contains rules and regulations related to parks and recreational facilities. For example, Chapter 8.67 of the Municipal Code, establishes a parks and recreation impact fee to acquire property in the City and provide three acres of parkland per 1,000 residents and one-half acre of parkland per 1,000 new employees. Further, the specific purpose of the park construction fee is to mitigate the impact of development projects on park facilities by collecting sufficient funds to construct adequate park facilities and improvements in the City, refurbish and expand existing facilities to maintain existing levels of service, and provide three acres of improved parkland per 1,000 residents and one-half acre of improved parkland per 1,000 new employees.

As the City receives development applications for subsequent development under the proposed project, those applications will be reviewed by the City of South San Francisco for compliance with the policies and actions of the General Plan Update to ensure that parks and recreational facilities keep pace with new development. In addition, development facilitated by the proposed project would be required to pay parks and recreation impact fees in accordance with Chapter 8.67 of the Municipal Code. Therefore, future development under the proposed project would not result in significant adverse effects related to parks and recreational facilities and impacts would be less than significant.

Level of Significance

Less than significant impact.

Effects from Provision of Parks or Recreational Facilities

Impact REC-2:	**The proposed project could include parks or recreational facilities or require the construction or expansion of parks or recreational facilities, which may have an adverse physical effect on the environment.**

As described in Chapter 2, Project Description, the proposed project could yield new parks, improved open space adjacent to State Route 35, and pedestrian and bicycle connections primarily east of US-101 and along the transit corridors (Exhibit 2-4). The proposed project also identifies planned and proposed parks and open spaces throughout the City, primarily within the Westborough, Orange Park, Lindenville, and East of 101 planning sub-areas (Exhibit 3.13-4). There could be environmental impacts associated with the construction of new or expanded parks and recreational facilities.

The project-specific environmental impacts of constructing new or expanded parks and recreational facilities to support the growth anticipated under the proposed project cannot be determined at this time because the designs of future new or expanded facilities are not known. However, it can be expected that construction and operation of future new or expanded parks and recreational facilities would have similar impacts as would construction and operation of other types of new development under the proposed project. As the City proceeds with the construction of new or expanded parks and recreational facilities, those projects will be reviewed by the City for compliance with the policies and actions of the General Plan Update, the City's Municipal Code, and the mitigation

measures referenced in other sections of this Draft Program EIR. Therefore, the physical effects on the environment from the construction of new or expanded parks and recreational facilities would be less than significant.

Level of Significance

Less than significant impact.

3.13.7 - Cumulative Impacts

The geographic context for analysis of cumulative impacts related to public services generally includes the South San Francisco Planning Area and is delineated by the local service areas within the City, as described below in each service area discussion. This analysis evaluates whether impacts of the proposed project, together with impacts of cumulative development, could result in a cumulatively significant impact to public services. This analysis then considers whether the incremental contribution of impacts associated with implementation of the proposed project would be significant. Both conditions must be fulfilled for a project's cumulative effects to rise to the level of significance.

Fire Protection Services

The geographic context for the analysis of cumulative impacts related to fire protection facilities includes the SSFFD service area, which comprises City of South San Francisco. A significant cumulative environmental impact would result if cumulative growth exceeded the ability of SSFFD to adequately serve their service area, thereby requiring construction of new facilities or modification of existing facilities. Even during the pandemic, continued development activity in the City provided revenue through impact fees, and license and permit fees. Additionally, SSFFD conducts a regular budgeting process where future facility and staffing needs are identified. All cumulative projects within the SSFFD service area would be required to comply with City ordinances and General Plan Update policies and actions that address fire protection services, including payment of public safety impact fees to provide funding for adequate fire equipment, vehicles, and facilities to meet the broad range of needs of South San Francisco residents and employees. Because past and present development will comply with all ordinances and policies, and there are mechanisms in place to ensure provision of adequate service, there would be no significant cumulative condition with respect to fire protection services. Therefore, cumulative impacts would be less than significant.

Moreover, the proposed project's incremental contribution to the less than significant cumulative impacts would not be significant. As discussed under Impact PUB-1, implementation of the proposed project would not create a need for new or physically altered facilities for the SSFFD to provide fire protection services to its service area.

As previously discussed, development facilitated by the proposed project would be required to comply with the policies and actions in the General Plan Update as well as the South San Francisco Municipal Code, to ensure that fire protection services are adequate as future development is proposed. Therefore, impacts of the proposed project on fire protection services are not cumulatively considerable and the cumulative impact would be less than significant.

Police Protection Facilities

The geographic context for the analysis of cumulative impacts related to police protection facilities includes the SSFPD service area, which comprises the City of South San Francisco. A significant cumulative environmental impact would result if this cumulative growth exceeded the ability of the SSFPD to adequately serve their service area, thereby requiring construction of new facilities or modification of existing facilities. Even during the pandemic, continued development activity in the City provided revenue through impact fees and license and permit fees. Additionally, SSFPD conducts a regular budgeting process where future facility and staffing needs are identified. All cumulative projects within the SSFPD service area would be required to comply with City ordinances and General Plan Update policies and actions that address police protection services, including payment of public safety impact fees to provide funding for adequate police equipment, vehicles, and facilities to meet the broad range of needs of South San Francisco residents and employees. Because past and present development will comply with all ordinances and policies, and there are mechanisms in place to ensure provision of adequate service, there would be no significant cumulative condition with respect to police protection services. Therefore, cumulative impacts would be less than significant.

Moreover, the proposed project's incremental contribution to the less than significant cumulative impacts would not be significant. As discussed under Impact PUB-2, implementation of the proposed project would not create a need for new or physically altered facilities for the SSFPD to provide police protection services to its service area.

As previously discussed, development facilitated by the proposed project would be required to comply with the policies and actions in the General Plan Update as well as the South San Francisco Municipal Code, to ensure that police protection services are adequate as future development is proposed. Therefore, impacts of the proposed project on police protection services are not cumulatively considerable and the cumulative impact would be less than significant.

School Facilities

The geographic context for the analysis of cumulative impacts related to school facilities includes the SSFUSD and private schools that serve South San Francisco and surrounding cities. Regional growth resulting from past, present, and reasonably foreseeable projects would result in increased demand for additional school facilities within the SSFUSD. Like development in South San Francisco, the schools are expected to receive development impact fees from cumulative development within other jurisdictions. The payment of school impact fees, per SB 50, would ensure that school facilities can accommodate future students. Therefore, cumulative impacts would be less than significant.

Moreover, the proposed project's incremental contribution to the less than significant cumulative impacts would not be significant. As discussed under Impact PUB-3, development facilitated by the proposed project would be required to pay the school impact fees adopted by each school district, per SB 50, and this requirement is considered to fully address the impacts of the proposed project on school facilities. Therefore, impacts of the proposed project on school facilities are not cumulatively considerable and the cumulative impact would be less than significant.

Library Facilities

The geographic context for analysis of cumulative impacts to library facilities includes the South San Francisco Public Library. A significant cumulative environmental impact would result if cumulative growth exceeded the ability of the South San Francisco Library to adequately serve people within their service area, thereby requiring construction of new facilities or modification of existing facilities. All cumulative projects would be required to comply with City ordinances and other policies that address library facilities and services, including library impact fees. Therefore, cumulative impacts would be less than significant.

Moreover, the proposed project's incremental contribution to the less than significant cumulative impacts would not be significant. As discussed under Impact PUB-4, development facilitated by the proposed project would be required to pay library impact fees. Therefore, impacts of the proposed project on library facilities are not cumulatively considerable and the cumulative impact would be less than significant.

Other Public Facilities

The geographic context for analysis of cumulative impacts to other public facilities includes the Planning Area. Development and growth in the City would increase demand for other public facilities. A significant cumulative environmental impact would result if cumulative growth exceeded the ability of the City to adequately serve people within their service area, thereby requiring construction of new facilities or modification of existing facilities. All cumulative projects would be required to comply with City ordinances and other policies that address other public facilities. Therefore, cumulative impacts would be less than significant.

Moreover, the proposed project's incremental contribution to the less than significant cumulative impacts would not be significant. As discussed under Impact PUB-5, implementation of the proposed project would not create a need for new or physically altered other public facilities to maintain acceptable service ratios or other performance objectives. Therefore, impacts of the proposed on other public facilities are not cumulatively considerable and the cumulative impact would be less than significant.

Parks and Recreational Facilities

The geographic context for the analysis of cumulative impacts of parks and recreational facilities includes the Planning Area. A significant cumulative environmental impact would result if this cumulative growth resulted in an increase in the use of existing parks and recreational facilities, such that substantial physical deterioration of the parks or recreational facilities would occur, be accelerated, to require the construction of new parks and recreational facilities or modification of existing parks and recreational facilities. All cumulative projects would be required to comply with City ordinances and General Plan Update policies that address parks and recreational facilities, such as paying park in-lieu fees and maintaining adequate parkland ratios. Therefore, cumulative impacts to parks and recreational facilities would be less than significant.

Moreover, the proposed project's incremental contribution to less than significant cumulative impacts would not be significant. As discussed under Impact REC-1, implementation 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. As discussed under Impact REC-2, the construction or expansion of parks and other recreational facilities are not expected to result in an adverse physical effect on the environment. As such, development anticipated under the proposed project would not create substantial impacts related to parks and other recreational facilities.

Further, potential future impacts to South San Francisco parks and recreational facilities would be further reduced through the contribution of a parks and recreation impact fee to ensure facilities at these locations are adequately maintained and sufficient to accommodate growth associated with cumulative development. Therefore, impacts of the proposed project on parks and other recreational facilities are not cumulatively considerable and the cumulative impact would be less than significant.

Level of Significance

Less than significant impact.

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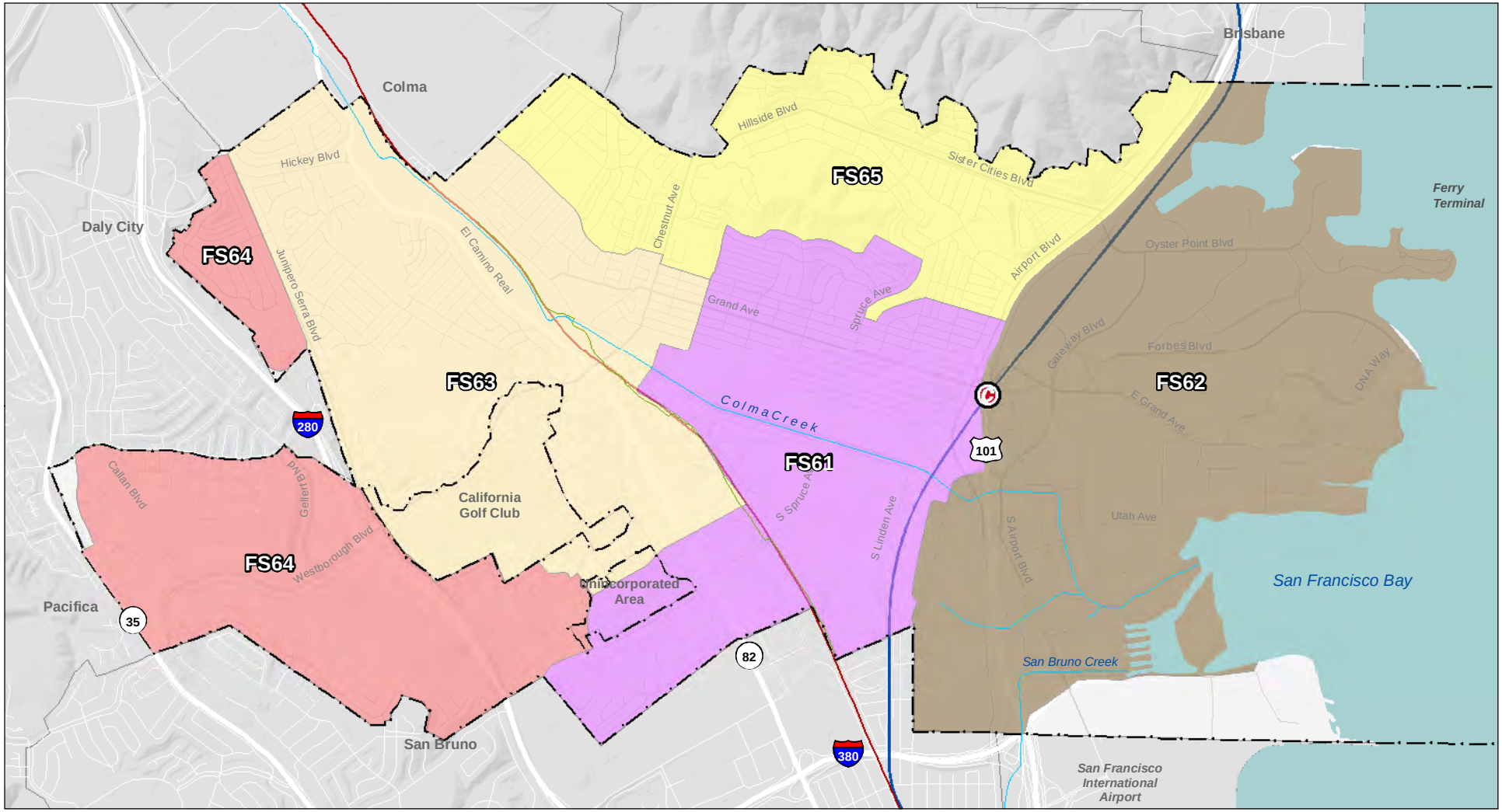

Source: Raimi + Associates, July 2019.

Jurisdictional Boundary

- City of South San Francisco
- Other City Boundaries
- Sphere of Influence

Transportation Features

- BART
- Caltrain
- Highway
- Arterial
- Local Street

Fire Station Response Areas

- FS61
- FS62
- FS63
- FS64
- FS65

- Streams
- Centennial Way Trail

FIRSTCARBON SOLUTIONS™

3,000 1,500 0 3,000 Feet

Exhibit 3.13-1
South San Francisco Fire Station Response Areas

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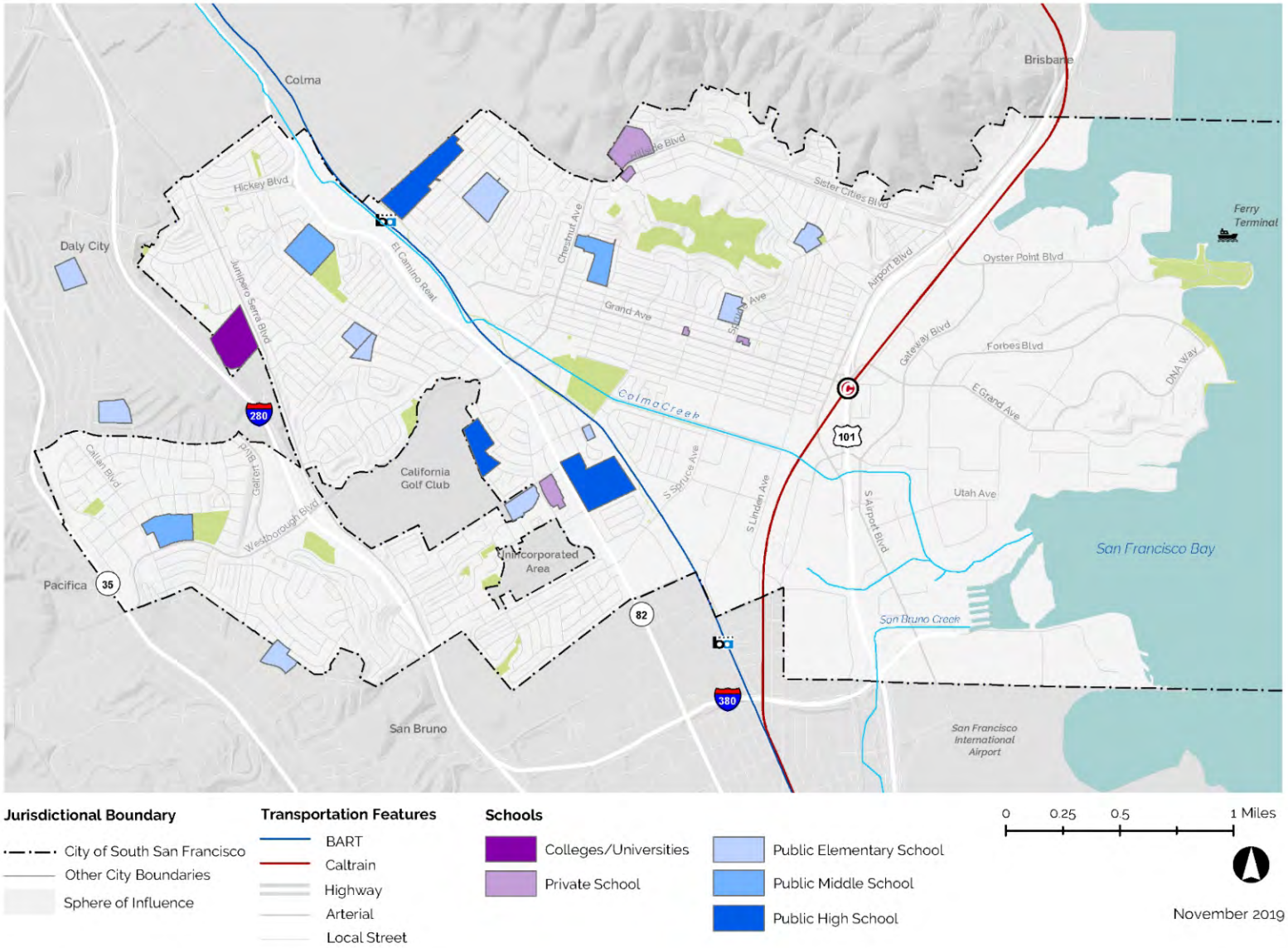

Source: SHAPE South San Francisco, November 2019.

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Exhibit 3.13-2
Schools and Colleges

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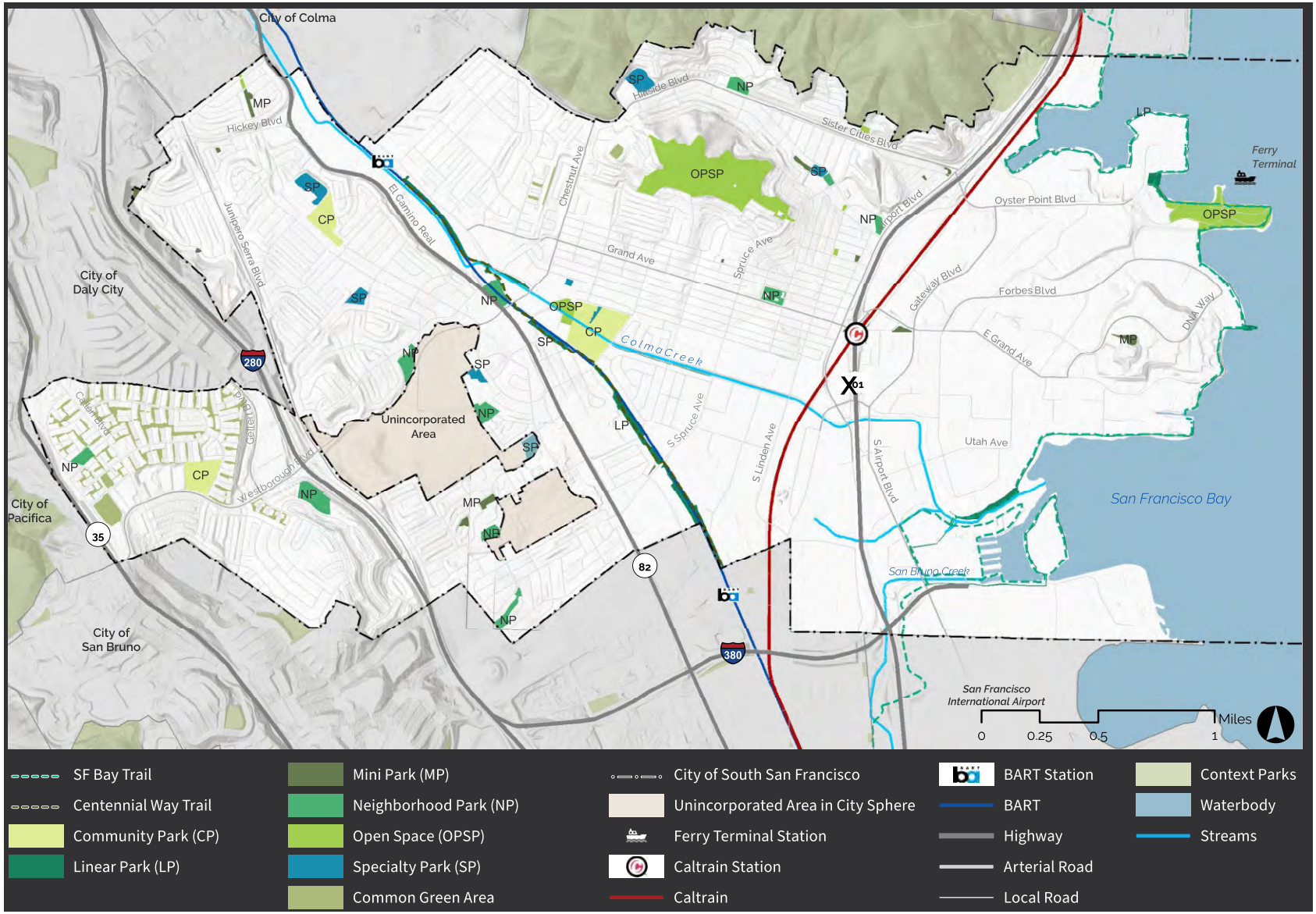

Source: SHAPE South San Francisco, 2040 General Plan.

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Exhibit 3.13-3
Parks, Recreational Facilities, Trails, and Open Spaces

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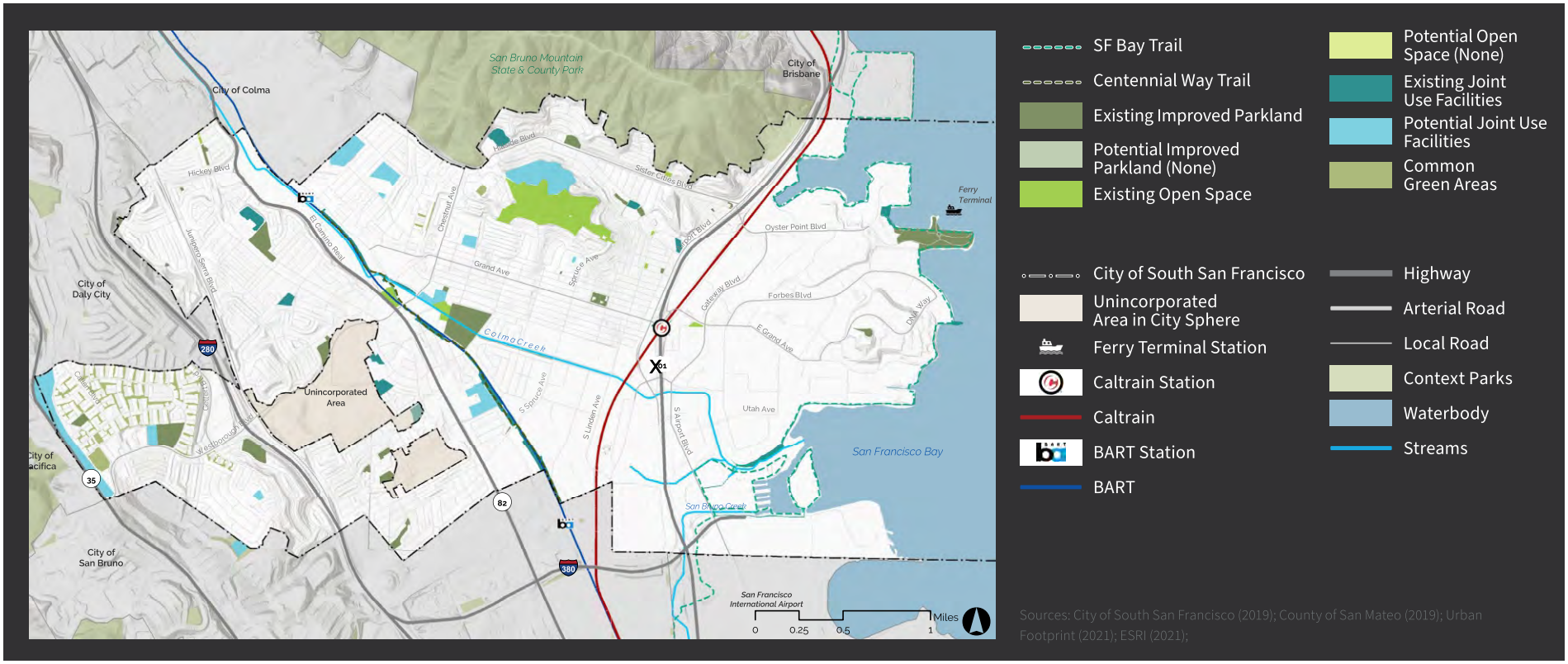

Source: SHAPE South San Francisco, 2040 General Plan.

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Exhibit 3.13-4
Existing or Potential Park Sites

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3.14 - Transportation

3.14.1 - Introduction

This section of the Draft Program Environmental Impact Report (Draft Program EIR) describes the current transportation conditions and addresses potential physical environmental effects related to transportation within the South San Francisco General Plan Update Planning Area (Planning Area) resulting from implementation of the General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project). The impact analysis examines the potential vehicular, transit, bicycle, and pedestrian components of the City's overall transportation system from implementation of the proposed project and evaluates the effects related to transportation, including conflicts with applicable plans and policies, hazards, changes in Vehicle Miles Traveled (VMT) per capita, and emergency vehicle access that may result from the implementation of the proposed project. Future discretionary projects facilitated by the proposed project would be evaluated for project-specific impacts related to transportation at the time they are proposed.

The following comments related to Transportation were received in response to the Notice of Preparation (NOP). Neither the California Environmental Quality Act (CEQA) Guidelines nor Statutes require a lead agency to respond directly to comments received in response to the NOP, but they do require that they be considered. Consistent with these requirements, the comments received in response to the NOP have been carefully reviewed and considered by the City in the preparation of impact analysis in this section. The comment letters are included in Appendix A.

- Recommends that a detailed VMT analysis be included in the Draft Program EIR for projects that do not meet the screening criteria.
- Recommends that the Draft Program EIR include a robust Transportation Demand Management (TDM) Program and provides a list of measures to reduce VMT and greenhouse gas (GHG) emissions.
- Recommends that TDM programs be documented with annual monitoring reports by a TDM coordinator.
- Requests that the City expand transit service, especially to and from the Bay Area Rapid Transit (BART) station.
- States that housing/mixed use (retail) near the BART station would help mitigate climate change/improve air quality by discouraging vehicle use.
- States that current and future land use projects proposed near and adjacent to the State Transportation Network shall be assessed, in part, through the California Department of Transportation (Caltrans) Transportation Impact Study Guide.
- Recommends a sufficient allocation of fair share contributions toward multimodal and regional transit improvements to fully mitigate cumulative impacts to regional transportation.

- States that if any Caltrans facilities are impacted by the proposed project, those facilities must meet Americans with Disabilities Act (ADA) Standards after project completion and maintain bicycle and pedestrian access during construction.

The descriptions and analysis in this section are based, in part, on statements, data, and figures provided by the following reference materials:

- South San Francisco General Plan Update
- South San Francisco Municipal Code
- City/County Association of Governments of San Mateo (C/CAG) – Valley Transportation Authority (VTA) Travel Demand Model and Congestion Management Program
- Transit service information and future plans from SamTrans, BART, Caltrain, San Francisco Bay Area Water Emergency Transportation Authority (WETA), and Commute.org
- Caltrans and Governor's Office of Planning and Research (OPR)
- Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG)
- South San Francisco General Plan Update, Transportation Existing Conditions Report, November 2019

The COVID-19 pandemic has dramatically changed the demand for travel in the Bay Area since March 2020. The effects of the initial shutdown resulted in substantial changes in travel behavior, including a decline in VMT and transit ridership, resulting in substantial cuts to transit service levels. While travel behavior has gradually returned to pre-pandemic levels, transit ridership levels have recovered at a slower pace. The existing conditions described in this section are based on data collected in 2019 prior to the onset of the pandemic. The forecasts for year 2040 conditions are based on regional forecasts prepared by MTC/ABAG and were not adjusted to reflect any lasting effects of COVID-19 on travel. It is MTC/ABAG's belief at this time that the current pandemic would have an impact on the economy in the short term but not in the long term. For this reason, 2019 is also used as the transportation analysis baseline.

3.14.2 - Environmental Setting

Roadway Network

The following is a summary of the roadway network that serves the City of South San Francisco. Exhibit 3.14-1 depicts the existing roadway network.

Regional Facilities

U.S. Highway 101

U.S. Highway 101 (US-101) is an eight-lane freeway that extends north to south on the eastern side of South San Francisco. US-101 is a heavily traveled freeway connecting San Francisco and the Bay Bridge with San Mateo and Santa Clara Counties. Four US-101 interchanges serve South San

Francisco at South Airport Boulevard and North Access Road, at Produce Avenue and South Airport Boulevard, at Grand Avenue, and at Sister Cities Boulevard and Oyster Point Boulevard.

Interstate 280

Interstate 280 (I-280) is an eight-lane freeway that extends north to south on the western side of South San Francisco. The freeway connects San Francisco with San Mateo and Santa Clara Counties. Two I-280 interchange serves South San Francisco at Westborough Boulevard and at Avalon Drive, while a third interchange at Hickey Boulevard is immediately adjacent to the City. King Drive crosses under I-280 but does not have access to the freeway.

Interstate 380

Interstate 380 (I-380) is a short east–west freeway spur that connects US-101 and I-280 via San Bruno and South San Francisco. The freeway has two interchanges that serve local traffic in or adjacent to South San Francisco at El Camino Real and North Access Road. It is also a key access route for the San Francisco International (SFO) Airport.

State Route 82/El Camino Real

State Route (SR) 82, otherwise known as El Camino Real, is a major arterial that extends north to south in South San Francisco connecting San Francisco to San José. SR-82 is generally four to six lanes with a speed limit of 35 miles per hour (mph). El Camino Real is an important transit corridor in San Mateo and Santa Clara counties.

State Route 35/Skyline Boulevard

SR-35 is a four lane roadway that extends north to south along the western border of South San Francisco. It connects South San Francisco and San Bruno with Daly City, Pacifica, and western San Francisco.

Local Facilities

The South San Francisco local street system is organized into six planning typologies in the General Plan Update that correspond with the traditional functional classifications in parentheses: boulevards (major arterials), connectors (minor arterials and collectors), downtown main streets (collectors and locals), industrial streets (locals), and neighborhood streets (locals). The planning typologies support multimodal complete streets planning and categorize streets by mobility purpose, mode priorities, and typical land uses to which they provide access. The functional classification system is a more automobile-centric classification method, which may be referenced for funding applications at the State and federal level.

Boulevards

Boulevards (arterials) serve as primary routes to destinations within the City or through the City. These roadways are designed to prioritize mobility and person throughput for all types of road users. They can accommodate larger volumes of travelers. They typically have four to six travel lanes (both directions combined), larger sidewalks, and dedicated bicycle facilities. Described in Table 3.14-1, these streets form the backbone of South San Francisco's circulation system.

Table 3.14-1: Boulevard Summary

Name	Description	Features	Ownership
Hillside Boulevard	Connects Linden Avenue to Daly City in the northern part of the City	Lanes/direction: 2 Speed limit: 40 mph Median: Yes Bike lane: Class II/III	City of South San Francisco
Sister Cities Boulevard	Runs east–west from Airport Boulevard to Hillside Boulevard	Lanes/direction: 2 Speed limit: 40 mph Median: Yes Bike lane: Class II	City of South San Francisco
Oyster Point Boulevard	Runs east–west from terminus near Oyster Point Marina to Airport Boulevard	Lanes/direction: 1-5 Speed limit: 30-35 mph Median: Yes Bike lane: Class II	City of South San Francisco
East Grand Avenue	Runs east–west from US-101 to Haskins Way	Lanes/direction: 1-3 Speed limit: 35 mph Median: Yes, east of US-101 Bike lane: Class II/III	City of South San Francisco
Westborough Boulevard	Runs east–west from El Camino Real and Chestnut Ave to Sharp Park Road and Skyline Boulevard	Lanes/direction: 2 Speed limit: 35 mph speed limit (except 25 mph in some areas) Median: Yes Bike lane: Class II/III	City of South San Francisco and County of San Mateo
Hickey Boulevard	Runs from El Camino Real west into Daly City	Lanes/direction: 2 Speed limit of 40 mph Median: Yes Bike lane: None	City of South San Francisco
Airport/South Airport Boulevard	Runs north–south from US-101 425C Exit ramps (Bayshore Boulevard) to San Mateo Avenue/South Airport Boulevard	Lanes/direction: 2 Speed limit: 35 mph Median: Yes Bike lane: Class II/III for north section of corridor	City of South San Francisco
Gateway Boulevard	Runs north–south from Oyster Point Boulevard to South Airport Boulevard	Lanes/direction: 2 Speed limit: 35 mph Median: Yes Bike lane: Class II for south section of corridor	City of South San Francisco
Junipero Serra Boulevard	Runs north–south from Daly City to Avalon Drive (relatively parallel to I-280)	Lanes/direction: 2 Speed limit: 50 mph Median: Yes Bike lane: Class II	City of South San Francisco

Name	Description	Features	Ownership
San Mateo Avenue	Runs north–south from Airport Boulevard to San Bruno city border	Lanes/direction: 2 Speed limit: 25 mph Median: Near US-101 Bike lane: none	City of South San Francisco
El Camino Real	Runs north–south from Daly City border to San Bruno border	Lanes/direction: 3-4 Speed limit: 35 mph Median: Yes Bike lane: Class II/III McLellan to Chestnut	Caltrans
Notes: mph = miles per hour Source: South San Francisco General Plan Update, Transportation Existing Conditions Report, November 2019.			

Connectors

Connectors (collectors) are primary or secondary streets that provide access to major destinations and denser residential or commercial areas and can accommodate moderate volumes of travelers. Connectors generally have two travel lanes, sometimes with short four lane segments or a center left turn lane. Examples of collector streets include Gellert Boulevard, Mission Road, and Utah Avenue.

Downtown Main Streets

Downtown streets are a special type of connector where mobility related to higher density commercial and housing converge into a single corridor in which people do business, live, and interact with each other. Downtown streets typically serve as destination corridors rather than through routes, with lower traffic speeds, higher pedestrian and bicycle volumes, and flexible use of curb space for high-turnover on-street parking, loading, bicycle parking, and parklets. These streets typically have narrower two-lane cross sections. Examples include Grand Avenue and Linden Avenue.

Neighborhood Streets

Neighborhood (local) streets are primarily located in residential neighborhoods. These streets provide local access to and between residential areas, commercial areas, schools, parks, and community centers. These streets typically have two travel lanes and on-street parking if street widths permit.

Industrial Streets

Industrial streets are like neighborhood streets but are designed to serve the needs of manufacturing and goods movement businesses that need access by larger and heavier vehicles. Common vehicles often include vans, single unit trucks, and smaller semi-trucks. Industrial streets may have two vehicle lanes, and occasionally wider lane widths to accommodate larger vehicles.

Motor Vehicle Safety

South San Francisco's motor vehicle collision record was analyzed from 2009-2018, excluding collisions on I-280 and US-101. Most collisions take place on the City's boulevards where travel

speeds are faster and vehicle volumes are highest. A subset of the City's streets account for most of the collisions. This subset is known as the High Injury Network and includes:

- Westborough Blvd. at Gellert Boulevard and at Junipero Serra Boulevard.
- El Camino Real at Chestnut Avenue/Westborough Boulevard, at West Orange Avenue, and at Spruce Avenue.
- Hickey Boulevard at Junipero Serra Boulevard and at El Camino Real.
- Spruce Avenue through downtown, especially at Grand Avenue.
- Linden Avenue through downtown, especially at Grand Avenue.
- Airport Boulevard at San Mateo Avenue.

Each of these locations had at least 20 collisions in the 10-year analysis period. Fatal collisions are also concentrated on boulevards except for two fatal collisions on Poletti Way. Additional detail on traffic collisions in South San Francisco can be found in Appendix H.

Bicycle Network

Bicycle facilities in South San Francisco consist of unprotected bike lanes, routes, trails, and paths, as well as bike parking, discussed in the parking section below. The existing bicycle network can be referenced in the Active South City: South San Francisco's Bicycle and Pedestrian Master Plan.[1] On-street bicycle facilities are classified into four categories depending on their design and function as described in Table 3.14-2. The City's auto-oriented boulevards, freeway interchanges, and hilly topography can serve as barriers to bicycling.

Table 3.14-2: Bikeway Classifications

Type	Length of Existing Facilities in South San Francisco	Description
Class I	10 miles	Provides a completely separated right-of-way for the exclusive use of cyclists and pedestrians with cross-flow minimized. Typically, the most desirable for all ages and abilities. Example: Centennial Trail
Class II	13 miles	Provides a striped lane for one-way travel on a street, which may include a "buffer" zone consisting of a striped portion of roadway between the bicycle lane and the nearest vehicle travel lane. Typically, suitable for some bicyclists comfortable sharing some space with cars. Example: Grand Avenue
Class III	24 miles	Provides for shared use with motor vehicle traffic to help guide bicyclists between major destinations. Typically, not suitable for most bicyclists except on local residential streets. Example: Chestnut Avenue

[1] City of South San Francisco. Active South City: South San Francisco's Bicycle and Pedestrian Master Plan, Draft. 2022. Website: https://activesouthcity.com/. Accessed June 3, 2022.

Type	Length of Existing Facilities in South San Francisco	Description
Class IV	0 miles	Provides a right-of-way designated exclusively for bicycle travel, which is protected from vehicular traffic. Types of separation include, but are not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking. Typically, suitable for most bicyclists. No examples in South San Francisco
Source: Fehr & Peers 2022.		

Bicycle Safety

In the 10 years from 2009 through 2018, there were 133 bicyclist injury collisions in the City, none of which were fatal. As shown in Appendix H, most of these collisions were concentrated on a small portion of the City's streets, with 53 percent occurring on the High Injury Network.

Grand Avenue and El Camino Real experienced the highest and second-highest number of collisions, respectively. Collisions on Grand Avenue were most heavily concentrated in the Downtown subarea. The Primary Collision Factor on Grand Avenue was improper turning. Crashes on El Camino Real occurred near commercial districts and at major intersections such as South Spruce Avenue, and the leading Primary Collision Factor for these crashes was bicycling on the wrong side of the road.

Pedestrian Network

Pedestrian facilities in South San Francisco consist of sidewalks, trails, staircases, crosswalks, curb ramps, and signals. Pedestrian-oriented land uses, street widths, lighting, and landscaping also contribute to the quality of the pedestrian environment.

Pedestrian activity in South San Francisco tends to be highest in the Downtown subarea, around the South San Francisco BART Station and El Camino High School, South San Francisco High School, retail destinations along El Camino Real, along the Centennial and Bay Trails, and around the Genentech Campus. The City's wide boulevards, freeway interchanges, and hilly topography can serve as barriers to walking. About 15 miles of streets in South San Francisco are missing one or both sidewalks, including along key corridors such as Westborough Boulevard, Junipero Serra Boulevard, and Hillside Boulevard.

Pedestrian Safety

Between 2009 and 2018, there were 228 total vehicle collisions in the City that involved a pedestrian fatality or injury. Of these collisions, six led to a pedestrian death. As shown in Appendix H, the pedestrian collisions were concentrated on a small portion of the City's roadway network, similar to the bicyclist injuries. Forty-seven percent of these collisions occurred on the High Injury Network.

As with the bicyclist collisions, Grand Avenue and El Camino Real experienced the highest number of collisions. They also accounted for four of the six fatalities that occurred during the 10-year study period. Collisions on Grand Avenue were concentrated in the Downtown subarea and in residential neighborhoods to the west and occurred in situations where the pedestrian had the right-of-way.

Crashes on El Camino Real occurred near commercial districts and at major intersections such as South Spruce Avenue. The most common collision type on El Camino Real included pedestrians who were in violation of crossing signals or were otherwise at fault.

Transit Network

The City of South San Francisco has bus, rail, and ferry service provided by six transit providers—BART, Caltrain, WETA, SamTrans, Commute.org, and the City of South San Francisco. Table 3.14-3 displays operational information for these services, while Appendix H illustrates these services. Many of these service frequencies and routes continue to evolve as operators emerge from the COVID-19 pandemic.

Table 3.14-3: Transit Service Summary

Service	Description	Peak Period Frequency (Pre-Covid, 2019)
BART Red Line	Connects Millbrae Station with Richmond Station via downtown San Francisco and downtown Oakland	15 minutes
BART Yellow Line	Connects SFO Airport with Pittsburg/Bay Point and Antioch Stations via downtown San Francisco and downtown Oakland	15 minutes
Caltrain	Connects San Francisco 4th and King Station with the San José Diridon Station	25-35 minutes (northbound AM/southbound PM) 60 minutes (southbound PM/northbound AM)
Commute.org Genesis Towers Shuttle	Connects Genesis Towers with BART and Caltrain	45 minutes
Commute.org Oyster Point Shuttle	Connects northern East of 101 Area employers with BART, Caltrain, and ferry services	15-25 minutes (BART) 25-35 minutes (Caltrain) 3 daily round trips (Ferry)
Commute.org Utah-Grand Shuttle	Connects southern East of 101 Area employers with BART, Caltrain, and ferry services	20-25 minutes (BART) 25-35 minutes (Caltrain) 3 daily round trips (Ferry)
SamTrans 28, 35, 37, and 39	School bus routes serving Alta Loma Middle School, El Camino High School, and South San Francisco High School	2-3 daily round trips
SamTrans 38	Connects Safe Harbor shelter in the East of 101 Area with downtown and BART	6 daily round trips
SamTrans 122	Connects South San Francisco BART Station with San Francisco State University via Daly City	30 minutes
SamTrans 130	Connects downtown South San Francisco with the Daly City BART Station via the South San Francisco	15 minutes

Service	Description	Peak Period Frequency (Pre-Covid, 2019)
SamTrans 141	Connects downtown South San Francisco with San Bruno and the San Bruno BART Station	30 minutes
SamTrans 292/397	Connects San Francisco and San Mateo via Brisbane, South San Francisco, SFO, and Burlingame (Route 397 extends to Palo Alto for late night service)	15 minutes
SamTrans ECR/ECR Rapid	Operates along El Camino Real between the Daly City BART Station and the Palo Alto Caltrain Station via Daly City, Colma, South San Francisco, San Bruno Millbrae, Burlingame, San Mateo, Belmont, San Carlos, Redwood City, Atherton, Menlo Park, and Palo Alto	12 minutes (ECR) 20 minutes (ECR Rapid)
South City Shuttle	Free circulator connecting destinations within South San Francisco	40 minutes
WETA	Connects South San Francisco Ferry Terminal with Oakland and Alameda (Main Street) Ferry Terminals	3 daily round trips

Notes:
BART = Bay Area Rapid Transit
SFO = San Francisco International Airport
Source: South San Francisco General Plan Update, Transportation Existing Conditions Report, November 2019.

Private Transit Services

Genentech and other employers operate their own transit services to supplement public transit services within the City. Genentech operates 23 long-distance express bus routes, three shorter distance connectors to transit stations, six on-campus circulator routes, and two ferry routes. While most of these services are not open to the public, a few (such as shuttles to the Millbrae Caltrain station) are open to all riders.

Major Transit Stations

South San Francisco BART Station

The South San Francisco BART station serves approximately 3,500 passengers on an average weekday. The station is primarily accessed via car (34 percent park-and-ride, 24 percent drop-off/pick up) or by walking (34 percent).

San Bruno BART Station

The San Bruno station is just south of the City. Though the station is very close to South San Francisco, just 14 percent of riders from San Bruno station live in South San Francisco, while 69 percent live in San Bruno and the rest live elsewhere.

South San Francisco Caltrain Station

The South San Francisco Caltrain Station is currently located along Dubuque Avenue underneath the East Grand Avenue overpass on the east side of US-101. The station serves approximately 470 passengers per day. Historically, the station has been one of the least utilized in the Caltrain system due to its relatively inaccessible location and low service levels. However, recently completed station

upgrades and Caltrain's electrification project are expected to result in increased service frequency and ridership.

South San Francisco Ferry Terminal

The South San Francisco Ferry serves approximately 580 daily passengers commuting from the East Bay to South San Francisco in the mornings and back to the East Bay in the evenings. Although ferry ridership has steadily increased by approximately 20 percent over the past five years, it remains among the least utilized regional ferry services due to its low service levels and limited adjacent land uses.

Rail and Goods Movement

South San Francisco rail infrastructure is mapped in Appendix H.

Caltrain

Caltrain operates along a mostly separated corridor through South San Francisco, except for the at-grade crossing of South Linden Avenue in the Lindenville subarea. There are grade-separated crossings at Airport Boulevard, US-101, Grand Avenue, US-101 southbound offramp toward Oyster Point, Oyster Point Boulevard, and US-101 northbound offramp toward Sierra Point Parkway.

Bay Area Rapid Transit

BART travels underground for the duration of its path through South San Francisco.

Freight Rail

Historically, South San Francisco experienced a relatively high volume of freight rail operations on rail spurs serving both the East of 101 and Lindenville subareas. As land uses have changed over time, these operations have decreased.

Freight rail service is provided (as of July 2019) by the Union Pacific Railroad (UPRR) in accordance with the terms of a 1991 Trackage Rights Agreement between UPRR and the Peninsula Corridor Joint Powers Board (PCJPB). The PCJPB owns the Peninsula Main Line right-of-way on which Caltrain operates, but UPRR owns several rail spurs in the East of 101 Area. Freight operation is restricted during the AM and PM peak periods and largely occurs during evening and night hours. UPRR currently operates three freight trains per weekday, all based out of the yard next to the South San Francisco Caltrain Station.

Freight service varies in response to freight customer needs and activity. The Peninsula Freight Rail User's Group estimates that the number of rail cars between San José and San Francisco over the past decade has averaged about 60 to 80 cars per day in each direction (once loaded, once empty). This translates to 20,000 to 30,000 loaded rail cars carrying 2 to 3 million tons of cargo between San José and the San Francisco Peninsula each year, the equivalent of at least 100,000 truck trips annually.

Truck Routes

The City of South San Francisco has not designated formal truck routes for goods movement. Most truck activity occurs in the East of 101 and Lindenville subareas serving warehouse, manufacturing, and research and development (R&D) uses.

Travel Characteristics

Mode Share

Residents and employees in South San Francisco use many different forms of transportation. The proportion of travelers taking different transportation modes (e.g., driving alone, riding transit, cycling, walking) is referred to as "mode share." Many factors effect mode choice, including vehicle ownership, availability of each mode at the start and end of a journey, and the length of a journey.

Residents of South San Francisco primarily rely on driving both for commuting and other trips (Table 3.14-4). Driving alone or carpooling accounts for 90 percent of all trips and 80 percent of commute trips, which is comparable to countywide averages. Transit use is also similar to countywide averages, tending to be higher for commute trips (14 percent) than all trips (4 percent). Residents of South San Francisco tend to walk and bike less compared to countywide averages.

Table 3.14-4 Mode Share for Commute Trips and General Trips

	South San Francisco		San Mateo County	
Population	67,120		763,450	
Mode	**All Trips**	**Commute Trips**	**All Trips**	**Commute Trips**
Drove alone	43%	67%	43%	69%
Carpooled	47%	13%	38%	11%
Public transit	4%	14%	4%	10%
Walked	6%	3%	12%	3%
Bicycled	<1%	<1%	2%	1%
Other	<1%	4%	1%	6%
Source: South San Francisco General Plan Update, Transportation Existing Conditions Report, November 2019.				

Commute Distribution and Trip Lengths

South San Francisco experiences a net inflow of daily commuters. There are approximately 36,000 commuters that originate in South San Francisco and approximately 51,000 commuters that work in South San Francisco. Within each of these groups, there are approximately 12,000 that do not leave the City because they both live and work within the City. When comparing mode share between these two groups, commuters to South San Francisco are more likely to drive alone and less likely to carpool or use public transportation than commuters originating in South San Francisco.

Commute times into South San Francisco jobs are significantly longer than commute times to jobs outside of South San Francisco. The outbound commute averages 27 minutes per direction as

compared to the average inbound commute at 35 minutes per direction. The difference is particularly pronounced for transit trips, which take 47 minutes for outbound commuters, but 63 minutes for inbound commuters each way. This means that the typical inbound transit commuter spends more than two hours of the day traveling to and from work in South San Francisco.

3.14.3 - Regulatory Framework

Federal

Applicable federal regulations pertaining to transportation are addressed in other sections of this Draft Program EIR, including Air Quality, Greenhouse Gas Emissions, and Hazardous Materials.

The federal Clean Air Act, the Infrastructure Investment and Jobs Act (IIJA), and ADA may have some relevance or influence for individual projects or actions as part of subsequent implementation of the proposed project.

State

California Department of Transportation

The California Department of Transportation (Caltrans) builds, operates, and maintains the State highway system, including the interstate highway system. Caltrans mission is to improve mobility Statewide. Caltrans operates under strategic goals to provide a safe transportation system, optimize throughput, and ensure reliable travel times, improve the delivery of State highway projects, provide transportation choices, and improve and enhance the State's investments and resources. Caltrans controls the planning of the State highway system and accessibility to the system. Caltrans establishes Level of Service (LOS) goals for highways and works with local and regional agencies to assess impacts and develop funding sources for improvements to the State highway system. Caltrans requires encroachment permits from agencies or new development before any construction work may be undertaken within the State's right-of-way. For projects that would impact traffic flow and levels of services on State highways, Caltrans would review measures to mitigate the traffic impacts.

Caltrans facilities in South San Francisco include US-101 and its interchanges, I-280 and its interchanges, I-380 and its interchanges, SR-82 (El Camino Real) and SR-35 (Skyline Boulevard).

California Public Utilities Commission

The California Public Utilities Commission (CPUC) sets guidelines for interactions between railroad facilities and ground transportation facilities. This includes location and type of crossing guards, design of railroad crossings, and other design criteria in and around railroad facilities. The guidelines come in the form of general orders. General Order NO. 75-D: Regulations Governing Standards for Warning Devices for At-Grade Highway-Rail Crossings in the State of California, provides regulations that govern the standards for warning devices for at-grade highway-rail crossings for motor vehicles, pedestrians, and/or bicycles. All warning devices shall be in substantial conformance with the applicable Standards, Guidance and Options set forth in the Manual on Uniform Traffic Control Devices adopted by Caltrans.

Senate Bill 375

Senate Bill (SB) 375, the Sustainable Communities and Climate Protection Act of 2008 (Chapter 728, Statues of 2008), provides guidance regarding curbing emissions from cars and light trucks. There are four major components to SB 375. First, SB 375 requires regional GHG emissions reduction targets. These targets must be updated every 8 years in conjunction with the revision of the housing and transportation elements of local general plans. Second, Metropolitan Planning Organizations (MPOs) are required to create a Sustainable Communities Strategy (SCS) that provides a plan for meeting regional targets. Third, SB 375 requires regional housing elements and transportation plans to be synchronized on 8-year schedules. Finally, MPOs must use transportation and air emissions modeling techniques that are consistent with the guidelines prepared by the California Transportation Commission (CTC).

Under SB 375, some development and transportation projects assumed as a part of the proposed project may be eligible to use a streamlined version of the environmental review process. Among other criteria, these projects must be consistent with the land use designation, density, intensity, and policies of Plan Bay Area 2050 and fall within the identified criteria for development and transportation projects.

California Complete Streets Act of 2008

Assembly Bill 1358, also known as the California Complete Streets Act of 2008, requires cities and counties to include “complete street” policies in their general plans. These policies address the safe accommodation of all users, including bicyclists, pedestrians, motorists, public transit vehicles and riders, children, the elderly, and the disabled. These policies can apply to new streets as well as the redesign of corridors. South San Francisco adopted their Complete Streets Policy (Resolution 86-2012) in 2012.

Senate Bill 743

In September 2013, the Governor’s Office signed SB 743 into law. The mandate of SB 743 was to devise an alternative traffic impact evaluation criterion that would promote the reduction of GHG emissions as well as foster the development of multimodal transportation networks and a diversity of land uses. Public Resources Code Section 21099, enacted by SB 743, is to limit the use of LOS standards in CEQA analysis and to promote the use of standards that place greater focus on implementing the State's goals of reducing GHG emissions, promoting transit, and increasing infill development.

SB 743 further suggested that a measurement such as VMT would be an appropriate method to evaluate traffic impacts (State CEQA Guidelines § 15064.3). VMT is defined as a measurement of miles traveled by vehicles within a specified region and for a specified time period. VMTs are calculated based on individual vehicle trips generated and their associated trip lengths. One vehicle traveling one mile constitutes one vehicle mile, regardless of its size, fuel type, or the number of passengers. VMT is a term used throughout this EIR and refers to the number of VMT within the City or region (or other specified geographic area) during a typical weekday and includes VMT for all trip types (commute, shopping, social/recreational, school, goods movement). The justification for this paradigm shift is that auto delay/LOS impacts may lead to improvements that increase roadway

capacity and therefore sometimes induce more traffic and GHG emissions as a result. In contrast, constructing projects in VMT-efficient locations assists California in meeting GHG emissions targets.

In December 2018, the California Natural Resources Agency certified and adopted the CEQA Guidelines update, including a new Guidelines section implementing SB 743 (State CEQA Guidelines § 15064.3). In implementing Public Resources Code Section 21099, State CEQA Guideline Section 15064.3 provides that VMT is generally "the most appropriate measure of transportation impacts," and that except for roadway capacity projects, a project's effect on traffic delays "shall not constitute a significant environmental impact." (14 California Code of Regulations [CCR] § 15064.3(a)).

Accordingly, as of July 1, 2020, under the statute and the Guidelines, localities are required to rely on VMT instead of traffic delay as the primary metric for evaluating transportation impacts in CEQA documents. The existence of automobile delay impacts, or the adequacy of an LOS analysis, is not a basis under CEQA for challenging an EIR (*Citizens for Positive Growth & Preservation v City of Sacramento (2019)* 43 CA 5th 609, 624).

For land use projects, SB 743 provides applicants the ability to streamline transportation analysis under CEQA for qualifying urban infill development near major transit stops in metropolitan regions throughout the State. The legislation established a new CEQA exemption for a residential, mixed-use, or employment center project if it is: (1) proposed in a transit priority area, or Transportation Planning Agency (TPA) (i.e., an area within one-half mile of a major transit stop that is existing or planned); (2) consistent with a specific plan for which an EIR was certified, and (3) consistent with the use, intensity, and policies of an SCS or Alternative Planning Strategy (APS) that is certified by the California Air Resources Board as meeting its greenhouse gas reduction targets. In addition, SB 743 establishes that aesthetic and parking impacts of these projects are not considered significant impacts on the environment.

Senate Bill 226

CEQA Streamlining for Infill Projects (SB 226) sets forth a streamlined review process for infill projects and includes performance standards that will be used to determine an infill project's eligibility for streamlined review. The purpose of SB 226 and updated CEQA Guideline Section 15183.3 is to streamline the environmental review process by "limiting the topics subject to review at the project level where the effects of infill development have been addressed in a planning level decision or by uniformly applicable development policies." Residential, commercial and retail, public office buildings, transit stations, and schools are eligible for this streamlining provided if they: (1) are located in an urban area on a site that has been previously developed or adjoins existing qualified urban uses on at least 75 percent of the site's perimeter; (2) satisfy the performance standards provided in Appendix M [of CEQA Guidelines]; and (3) are consistent with the general land use designation, density, building intensity, and applicable policies specified for the project area in either an SCS or an APS, with some exceptions.

Under SB 226, some development and transportation projects assumed as a part of the proposed project may be eligible to use a streamlined version of the environmental review process. Among other criteria, these projects must be consistent with the land use designation, density, intensity, and policies of Plan Bay Area, and fall within the identified criteria for development and transportation projects.

Evacuation Routes Assembly Bill 747

Assembly Bill 747 requires local governments, on or after January 1, 2022, to review and update their safety element to identify evacuation routes and their capacity, safety, and viability under a range of emergency scenarios. A county or city that has adopted a local hazard mitigation plan, emergency operations plan, or other document that fulfills commensurate goals and objectives may use that information in the safety element to comply with this section and, in that event, shall summarize and incorporate into the safety element that other plan or document.

Residential Emergency Evacuation Routes Senate Bill 99

SB 99 requires all cities and counties, upon the next revision of the housing element on or after January 1, 2020, to update the safety element to include information identifying residential developments in any hazard area identified in the safety element that do not have at least two emergency evacuation routes.

California Bicycle Transportation Act

The California Bicycle Transportation Act (1994) requires all cities and counties to have an adopted bicycle master plan to apply for the Bicycle Transportation Account funding source. The City's existing plan, the South San Francisco Bicycle Master Plan (2011), will soon be superseded by the Active South City Plan, which combines the City's bicycle and pedestrian plans.

Regional

Metropolitan Transportation Commission

The regional TPA and MPO for the nine-county Bay Area is the MTC. MTC is the authorized clearinghouse for State and federal transportation improvement funds. Each county's Congestion Management Agency (CMA) sends a capital improvement project list to MTC. MTC reviews the lists submitted by all nine Bay Area counties and submits a regional priority list to the CTC and/or the Federal Highway Administration (FHWA) for selection of projects to receive funding. Funded projects are then included in the Regional Transportation Plan (RTP) prepared by MTC.

Plan Bay Area 2050: A Vision for the Future

Plan Bay Area is the Bay Area's RTP/ SCS. Plan Bay Area 2050, adopted jointly by the ABAG and MTC on October 21, 2021, is the current version of the plan. Defined by 35 strategies for housing, transportation, economic vitality and the environment, Plan Bay Area 2050 lays out a $1.4 trillion vision for policies and investments to make the nine-county region more affordable, connected, diverse, healthy, and economically vibrant for all its residents through 2050 and beyond. The transportation strategies in Plan Bay Area 2050 fall into three categories:

1. Maintain and Optimize the Existing System
2. Create Healthy and Safe Streets
3. Build a Next-Generation Transit System

As part of the implementing framework for Plan Bay Area, local governments have identified Priority Development Areas (PDAs) and Transit-Rich Areas (TRAs) to focus growth. PDAs are transit-oriented, infill development opportunity areas within existing communities. TRAs are areas near rail, ferry or

frequent bus service that were not already identified as PDAs. Specifically, these are areas where at least 50 percent of the area is within 0.5 mile of either an existing rail station or ferry terminal (with bus or rail service), a bus stop with peak service frequency of 15 minutes or less, or a planned rail station or planned ferry terminal (with bus or rail service). Within South San Francisco, El Camino Real and the downtown area west of the Caltrain station are designated PDAs while the full 0.5-mile around the South San Francisco BART station, the Caltrain station, and the ferry terminal are included as TRAs.

The C/CAG model has yet to be updated to reflect Plan Bay Area 2050 so modeling work for this Draft Program EIR relies on the previous RTP, Plan Bay Area 2040. Plan Bay Area 2050 also extends beyond the 2040 General Plan Update planning horizon so General Plan buildout could occur before the Plan Bay Area buildout.

Bay Area Commuter Benefits Program

Under Air District Regulation 14-1-102, Model Source Emissions Reduction Measures, Rule 1, Bay Area Commuter Benefits Program, employers with 50 or more full-time employees within the Bay Area Air Quality Management District (BAAQMD) are required to register and offer commuter benefits to employees. In partnership with the BAAQMD and the MTC, the rule's purpose is to improve air quality, reduce GHG emissions, and decrease the Bay Area's traffic congestion by encouraging employees to use alternative commute modes, such as transit, vanpool, carpool, bicycling, and walking. The benefits program allows employees to choose from one of four commuter benefit options including a pre-tax benefit, employer-provided subsidy, employer-provided transit, and alternative commute benefit.

San Mateo City/County Association of Governments

San Mateo C/CAG is the CMA for San Mateo County authorized to set State and federal funding priorities for improvements affecting the San Mateo County Congestion Management Program (CMP) roadway system. San Mateo C/CAG-designated CMP roadway system components in South San Francisco include SR-82 (El Camino Real), US-101, I-380, and I-280, but do not include any intersections within the City.

San Mateo C/CAG has adopted TDM guidelines to reduce the number of net new vehicle trips generated by new developments. These guidelines apply to all developments that generate 100 or more net new vehicular trips on the CMP network.

San Mateo County Transit District

The San Mateo County Transit District (SamTrans) is the administrative body for public transit in San Mateo County. SamTrans operates bus and paratransit service in South San Francisco and serves as the administrative agency for Caltrain's rail service.

Peninsula Corridor Joint Powers Board

The PCJPB owns and operates Caltrain. The Joint Powers Board (JPB) consists of representatives from San Francisco, San Mateo, and Santa Clara counties. Caltrain's Business Plan establishes a 2040

service vision to continue expanding its service and modernizing its infrastructure, building upon its ongoing electrification project.

Bay Area Rapid Transit

BART has authority over rail service and facilities spanning its services in the East Bay, San Francisco, and San Mateo County. BART's Transit Oriented Development (TOD) Policy informs BART's internal and external approach to development near BART stations.

Local

City of South San Francisco

The City of South San Francisco is responsible for planning, constructing, and maintaining local transportation facilities, including all City streets, City-operated traffic signals, sidewalks, and bicycle facilities. The City has jurisdiction over all City streets and traffic signals with the exception of those operated by Caltrans or San Mateo County.

Active South City: Bicycle and Pedestrian Master Plan

The Active South City: Bicycle and Pedestrian Master Plan identifies improvements for providing safer walking and biking environments and making active transportation an integral part of the City's transportation system.[2]

South San Francisco General Plan Update

The General Plan Update includes the following relevant policies and actions that assist in reducing or avoiding impacts related to transportation:

Mobility Element

Policy MOB-1-1 Use a systemic safety approach to proactively identify and address safety risks.

Action MOB-1.1.1 Develop a Vision Zero Action Plan. Develop and implement a Vision Zero Action Plan that incorporates a prioritization approach for the Capital Improvement Program (CIP) and maintenance response process and identifies safety countermeasures to incorporate into all development projects and capital improvements.

Policy MOB-1-2 Strive to reduce vehicle speeds throughout the City to reduce the frequency and severity of collisions.

Action MOB-1.2.1 Incorporate traffic calming. Incorporate traffic calming treatments into all street projects to support lower design speeds.

[2] City of South San Francisco. Active South City: South San Francisco's Bicycle and Pedestrian Master Plan, Draft. 2022. Website: https://activesouthcity.com/. Accessed June 3, 2022.

Action MOB-1.2.2 Evaluate reducing speed limits. Evaluate reducing speed limits on the City's high injury network, transit priority streets, school areas, and other streets with high concentrations of vulnerable street users.

Policy MOB-2-1 Incorporate complete streets improvements into all roadway and development projects.

Action MOB-2.1.1 Complete multimodal design and impact analysis. Ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled.

Action MOB-2.1.2 Create multimodal prioritization processes. Develop Capital Improvement Program (CIP) prioritization criteria to strategically advance multimodal complete streets projects.

Action MOB-2.1.3 Implement Active South City Pedestrian and Bicycle Plan. All capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans.

Action MOB-2.1.4 Implement transit speed, reliability, and access improvements. All capital improvements and development projects near regional transit stations or bus/shuttle routes incorporate improvements to advance speed, reliability, and access, such as in-lane far-side bus stops, bus-only lanes, queue jumps, and pedestrian/bicycle gap closures.

Action MOB-2.1.5 Address ADA accessibility. Address ADA accessibility gaps in the City's transportation infrastructure, including at sidewalks, curb ramps, crosswalks, and bus stops.

Policy MOB-2-2 Advance more equitable transportation within South San Francisco.

Action MOB-2.2.1 Implement Safe Routes to Schools program. Collaborate with the South San Francisco Unified School District to implement Safe Routes to Schools programs and improvements, with an emphasis on schools serving equity priority communities.

Action MOB-2.2.2 Develop free bus and shuttle service for residents. Develop a dedicated funding source or leverage private sector contributions to fund the South City shuttle and free bus service for South San Francisco residents.

Action MOB-2.2.3 Incorporate equitable prioritization processes. Incorporate equity in identifying and prioritizing Capital Improvement Program (CIP) transportation projects.

Policy MOB-3-1 Promote mode shift among employers. Manage the number of vehicle trips, with a focus on promoting mode shift among employers.

Action MOB-3.1.1 Update and implement TDM Ordinance. Implement, monitor, and enforce compliance with the City's TDM Ordinance. Maintain consistency with C/CAG's requirements. Periodically update the TDM Ordinance as transportation conditions change. Incorporate a fine structure for noncompliance.

Action MOB-3.1.2 Implement an East of 101Trip Cap. Implement an East of 101 area trip cap with triennial monitoring and corrective actions if exceeded. Implement project-specific trip caps for large campus developments.

Policy MOB-3-2 Optimize traffic operations on City streets. Optimize traffic operations on City streets while avoiding widening roadways or otherwise pursuing traffic operations changes at expense of multimodal safety, transit reliability, or bicycle and pedestrian comfort.

Action MOB-3.2.1 Update traffic operations metrics. Use appropriate metrics (e.g., travel time, vehicle queues, vehicle delay/level of service, and/or person delay) to evaluate and advance projects that manage traffic flow in coordination with the implementation of complete streets.

Action MOB-3.2.2 Incorporate new street connections. Incorporate new street connections to better distribute vehicle trips across South San Francisco's street network, especially in the East of 101 Area (as illustrated in Figure 14 and Table 6).

Policy MOB-3-3 Right-size parking supply and maximize the efficiency of curb space.

Action MOB-3.3.1 Incorporate parking maximums. Incorporate maximum parking requirements for new residential and office/R&D projects that align with TDM Ordinance trip reduction goals.

Action MOB-3.3.2 Evaluate curb management practices. Evaluate the current and best use of curb space in the City's activity centers and repurpose space to maximize people served (i.e., for loading, bikeways, bike parking, bus lanes, or parklets).

Policy MOB-3-4 Use parking management tools to manage limited street space in residential neighborhoods.

Action MOB-3.4.1 Create funding and staffing plan for a Residential Parking Permit Program. Create a funding and staffing plan for a Residential Parking Permit (RPP) Program in higher density neighborhoods.

Policy MOB-4-1 Increase substantially the proportion of travel using modes other than driving alone.

Action MOB-4.1.1 Use site plan review to improve connectivity. Use the development review process to identify opportunities to enhance bicycle, pedestrian, and transit connectivity.

Action MOB-4.1.2 Expand transit service. Continue collaboration with Caltrain, SamTrans, Water Emergency Transportation Authority (WETA), and shuttle providers to scale service levels in growing areas. Consider independently operated transit services to fill regional transit gaps.

Action MOB-4.1.3 Leverage employee transit subsidies. Leverage private sector subsidies of transit fares to support BART, Caltrain, SamTrans, and Water Emergency Transportation Authority (WETA) ridership.

Action MOB-4.1.4 Incorporate first/last-mile connections. Incorporate first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.

Policy MOB-4-2 Embrace innovation. Prepare the City for changes to transportation technology (such as autonomous vehicles and micromobility) and incorporate such innovations into projects when appropriate and where feasible.

Policy MOB-5-1 Expand the low-stress bike and pedestrian network. Capitalize on opportunities to expand the low-stress bike and pedestrian network throughout the City.

Action MOB-5.1.1 Complete rails to trails projects. Leverage public-private partnerships to complete the conversion of the City's freight rail lines to multi-use trails.

Action MOB-5.1.2 Develop Bikeways and slow streets. Grow network of low-stress bikeways and Slow Streets that prioritize direct access to recreation and active transportation within the City's residential neighborhoods.

Action MOB-5.1.3 Expand bicycle parking at activity centers. Expand bicycle parking at major activity centers throughout the City.

Policy MOB-5-2 Enhance access to the trail network. Enhance access to Centennial Way Trail, Bay Trail, and other trail facilities through streetscape projects and new developments.

Table 3.14-5: General Plan Update Circulation Improvements

No.	City Involvement	Street	Proposed Change	Street Characteristics	Proposed Typology	Purpose
1	High	Oyster Point Boulevard	Addition of bus-only lanes between US-101 and ferry terminal	Six lanes (two bus-only lanes) + bike lanes, 30 mph	Boulevard (Transit Priority Corridor)	Adds capacity for East of 101 Area and improves first/last mile

No.	City Involvement	Street	Proposed Change	Street Characteristics	Proposed Typology	Purpose
						access to regional transit
2	High	East Grand Avenue	Addition of bus-only lanes between the Caltrain Station and Haskins Way, trail gap closure between Caltrain Station and Forbes Boulevard, and bus-only ramp to Poletti Way	6 lanes (two bus-only lanes) + bike lanes, 30 mph (Bus-only ramp: 1 lane + multiuse trail, 25 mph)	Boulevard (Transit Priority Corridor)	Adds capacity for East of 101 Area and improves first/last mile access to regional transit
3	High	New East of 101 Trails	Three miles of new multiuse trails along Poletti Way and parallel to Forbes Boulevard, Eccles Avenue, and Harbor Way	N/A	Class I Bikeway	Expands active transportation network and improves first/last mile access to regional transit
3	High	Utah Avenue Interchange	Extension from South Airport Boulevard to San Mateo Avenue with connection to Produce Avenue	4 lanes + bike lanes, 25 mph	Boulevard	Connects East of 101 Area and Lindenville and improves access to US-101
5	High	Haskins Way	Haskins Bridge connecting Haskins Way in the north to North Access Road to the south	4 lanes + multiuse trail, 40 mph	Boulevard	Adds capacity for East of 101 Area
6	High	Oyster Point Boulevard	Extension of Oyster Point Boulevard to Sierra Point via new bridge	2 lanes + multiuse trail, 30 mph	Boulevard	Adds capacity for East of 101 Area
7	High	Railroad Avenue	Connect Sylvester Road and Littlefield Avenue using railroad right-of-way	2 lanes + bike lanes, 25 mph	Connector	Improves internal connectivity in East of 101 Area and supports corridor redevelopment

No.	City Involvement	Street	Proposed Change	Street Characteristics	Proposed Typology	Purpose
9	Medium	Sneath Lane Extension	Extension of Sneath Lane from Huntington Avenue to South Linden Avenue and connection between Maple Avenue and Huntington Avenue	4 lanes + bike lanes, 25 mph	Boulevard (Transit Priority Corridor)	Connects Lindenville to San Bruno
10	Medium	El Camino Real	Grand Boulevard Modernization	6 lanes + bike lanes, 30 mph	Boulevard (Transit Priority Corridor)	Supports corridor redevelopment
11	Medium	South Airport Boulevard	Modernization to add median, protected bike lanes, enhanced bus stops, and wider sidewalks	4 lanes + bike lanes, 30 mph	Boulevard (Transit Priority Corridor)	Supports corridor redevelopment
12	Medium	Grand Avenue	Downtown Streetscape Project	2 lanes + bike lanes, 25 mph	Downtown Main Street	Improves walkability and first/last mile access to Caltrain station
13	Medium	New Street	New street connecting Eccles Avenue to Forbes Boulevard between Rozzi Place and Gull Drive	2 lanes + bike lanes, 25 mph	Connector	Improves internal connectivity in East of 101 Area
14	Medium	New Street	New street connection between El Camino Real and Mission Road aligned with Sequoia Avenue, Grand Avenue, or Oak Avenue	2 lanes + bike lanes, 25 mph	Neighborhood	Improves east–west connectivity across Colma Creek
15	Medium	Maple Avenue	Connect Maple Avenue between Railroad Avenue and South Canal Street including a bridge	2 lanes, 25 mph	Neighborhood	Connects Lindenville and Downtown

No.	City Involvement	Street	Proposed Change	Street Characteristics	Proposed Typology	Purpose
16	Medium	South Linden Avenue	South Linden Grade Separation and Tanforan Avenue Pedestrian Undercrossing	2-4 lanes + bike lanes, 25 mph	Boulevard	Improves internal connectivity in Lindenville and first/last mile access to BART
17	Medium	New Trail	Connect Centennial Way Trail and Bay Trail via US-101 overcrossing	N/A	Class I Bikeway	Improves first/last mile access to BART
18	Low	Littlefield Avenue	Extension from East Grand Avenue to Eccles Avenue via Cabot Road, Forbes Boulevard, and Carlton Court	2 lanes, 25 mph	Connector	Improves internal connectivity in East of 101 Area
19	Low	Point San Bruno Boulevard	Formalize connection between Point San Bruno Boulevard and East Grand Avenue	2 lanes, 25 mph	Connector	Improves internal connectivity in East of 101 Area
20	Low	Myrtle Avenue	Extension from South Spruce Avenue to South Maple Avenue	2 lanes, 25 mph	Neighborhood	Improves internal connectivity in Lindenville
21	Low	Harris Avenue	Connect cul-de-sac with E. Harris Avenue	2 lanes, 25 mph	Neighborhood	Improves internal connectivity in East of 101 Area
22	Low	Roebling Road	Extension across East Grand Avenue to proposed Railroad Avenue	2 lanes, 25 mph	Neighborhood	Improves internal connectivity in East of 101 Area
23	Low	Swift Avenue	Extend Swift Avenue to Littlefield Avenue	2 Lanes, 25 mph	Neighborhood	Improves internal connectivity in East of 101 Area
24	Low	Wattis Way	Extend Wattis Way to South Airport Boulevard	2 Lanes, 25 mph	Neighborhood	Improves internal connectivity in East of 101 Area

No.	City Involvement	Street	Proposed Change	Street Characteristics	Proposed Typology	Purpose
25	Contingency and other local streets and active transportation projects identified in other plans.					

City of South San Francisco Climate Action Plan

The Climate Action Plan includes the following actions that assist in reducing or avoiding impacts related to transportation:

Action TL 1.1 Electric Vehicle Charging Reach Code. Implement EV reach code.

Action TL 1.2 Seek opportunities to install additional electric vehicle chargers at suitable public facilities, including Downtown parking structures and community and regional parks.

Action TL 2.1 Trip Cap on East of 101. Implement an East of 101 area trip cap with triennial monitoring and corrective actions if exceeded to manage the number of vehicles entering the area.

Action TL 2.2 TDM Program. Implement, monitor, and enforce compliance with the City's TDM Ordinance.

Action TL 2.3 Improve Curb Management. Evaluate the current and best use of curb space in the City's activity centers and repurpose space to maximize people served (i.e., for loading, bikeways, bike parking, bus lanes, EV charging, or parklets).

Action TL 2.4 Parking Demand Management Strategy. Incorporate maximum parking requirements for new residential and office/R&D projects.

Action TL 2.5 Development along Transit Corridors. For all new land use and transportation projects, adhere to the City's VMT Analysis Guidelines and qualitatively assess the project's effect on multimodal access. Use the development review process to identify opportunities to enhance bicycle, pedestrian, and transit connectivity.

Action TL 2.6 Complete Streets Policy. Ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled. Develop a Capital Improvement Program (CIP) prioritization criteria, including equity considerations for SB 1000 neighborhoods, to strategically advance multimodal complete streets projects. All capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans.

Action TL 2.7 Free Local Bus Service. Develop a dedicated funding source or leverage private sector contributions to fund the South City shuttle and free bus service for South City residents.

Action TL 2.8 Improve Transit Station Access. Leverage public-private partnerships to increase transit ridership and improve transit station access by incorporating first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.

Action TL 2.9 Scale Transit Service Levels. Continue collaboration with Caltrain, SamTrans, WETA, and shuttle providers to scale service levels in growing areas and leverage private sector subsidies of transit fares to support BART, Caltrain, SamTrans, and WETA ridership.

City of South San Francisco Municipal Code

Chapter 8.73 Transportation Impact Fee

Chapter 8.73 establishes the specifics of a transportation impact fee to require that new developments pay their fair and proportional share of improvements and facilities. Improvements and facilities must be constructed to accommodate the increased travel demand of new developments, while maintaining current service standards, to reduce transportation impacts caused by the new development, and to implement the transportation related goals contained within the General Plan. Successful implementation of the transportation impact fee, voids application of the Bicycle and Pedestrian impact fee (Chapter 8.68) and East of 101 impact fee.

Title 11 Vehicles and Traffic

The Vehicle and Traffic Code contains regulations for design, operation, and enforcement of the local roadway network and users of the network. This code covers traffic control devices, traffic enforcement, traffic rules, pedestrian regulations, trucks routes, parking design and enforcement, and speed limits.

City of South San Francisco Zoning Ordinance

The South San Francisco Zoning Ordinance contains transportation regulations for various land uses in the City including parking and loading and TDM requirements. In particular, the following chapters of the South San Francisco Zoning Ordinance, including the new or revised chapters of the Zoning Ordinance that are part of the proposed project, assist in reducing or avoiding impacts related to transportation.

Chapter 20.400 Transportation Demand Management (revised)

The specific purposes of this chapter are intended to:

A. Reduce the number of vehicle miles traveled generated by new development in accordance with the City's police power necessary to protect the public health, safety, welfare, and environment.

B. Manage traffic congestion, especially congestion associated with drive-alone commute trips during peak traffic periods by using a combination of services, incentives, and facilities.

C. Promote more efficient utilization of existing transportation facilities and ensure that new developments maximize transit, active transportation, carpooling, and vanpooling usage.

D. Establish an ongoing monitoring and enforcement program to ensure that the desired performance targets are achieved.

E. Achieve compliance with the City/County Association of Governments of San Mateo County's (C/CAG) Congestion Management Program.

Section 20.400.002 (Applicability) (revised) identifies the new development types that are subject to this Ordinance (e.g., residential land uses with 20 or more units and office and R&D uses with at least 400,000 square feet of gross floor area).

Section 20.400.003 (Trip Reduction Measures and Requirements) (revised) identifies a variety of measures that new developments can implement to reduce the number of vehicle trips generated. Some of the measures include participation in Commute.org, transit pass subsidies, carpool/vanpool programs, bicycle storage, showers and lockers, transit capital improvements, and on-site pedestrian-oriented amenities.

Section 20.400.005 (Submittal Requirements and Approvals) (revised) requires that a project submit its TDM documentation with its development application, which includes a completed TDM checklist of the trip reduction measures chosen by the applicant and a description of how the applicable performance requirements would be achieved and maintained over the life of the project. Further, before approval of a permit for a project subject to the requirements of this chapter, the City shall make the following findings:

1. The proposed TDM program is feasible and appropriate for the project, considering the proposed use or mix of uses and the project's location, size, and hours of operation.
2. The proposed TDM program meets the points requirements indicated for the tier and land use of the project.
3. The TDM program is adequate to achieve the required performance measures (Tiers 3 and 4 only).

Chapter 20.330 On-site Parking and Loading (revised)

Section 20.330.007 (Bicycle Parking) (revised) establishes short-term and long-term bicycle parking requirements for new buildings and land uses, reconstruction, expansion, and change in the use of nonresidential buildings, additions, and alternations to existing dwelling units, and alterations that increase the number of dwelling units.

3.14.4 - Methodology

Impacts related to transportation resulting from implementation of the proposed project (collectively, the General Plan Update, Zoning Code Amendments, and Climate Action Plan) are discussed below. The impact analysis is based on travel demand forecasts prepared using the C/CAG -VTA Travel Demand Model and review of published information and reports regarding local and regional transportation trends and changes.

This evaluation of transportation impacts assumes that construction and development under the proposed project would adhere to applicable federal, State, and local regulations and would conform to appropriate standards in the industry, as relevant for individual projects. Where existing regulatory requirements or permitting requirements exist that are law and binding on responsible agencies and project sponsors, it is reasonable to assume that they would be implemented, thereby reducing impacts.

Analysis Scenarios

2019 Existing Conditions

As discussed in Chapter 2, Project Description, Section 2.3.4, existing conditions are defined as the physical environmental conditions as they exist at the time the Draft Program EIR NOP is published. The NOP for this Draft Program EIR was published on January 14, 2022. However, because of the effects of the COVID-19 pandemic on travel (i.e., temporarily reduced travel), Existing Conditions are based on traffic count data collected in 2019 and information on travel patterns and regulations benchmarked in the same year. This analysis uses 2019 Existing Conditions as the environmental baseline from which to assess impacts caused by the proposed project. This is a more conservative analysis and hinges on the assumption that travel patterns will return to pre-pandemic levels over time. The 2019 Existing Conditions network and travel patterns are described above under Environmental Setting.

2040 General Plan Update Transportation System

For the analysis contained within the Transportation section, implementation of the General Plan Update is projected to add approximately 43,000 residents and 81,000 jobs to the City of South San Francisco at buildout.[3] To accommodate this growth, the General Plan Update includes 25 circulation improvements listed in Table 3.14-5. Exhibit 3.14-1 depicts the proposed roadway changes and typologies. The General Plan Update also identifies adjustments to the City's designated truck routes. These changes are added on top of background transportation projects slated for completion before the 2040 horizon year. This includes planned and funded projects within the City as well as major projects funded elsewhere in the County and region (including the US-101 Express Lanes and Caltrain Business Plan Service Vision). Background projects were coded into the 2040 C/CAG-VTA Travel Demand Model by VTA and C/CAG staff.

Vehicle Miles Traveled Analysis

SB 743 requires cities to evaluate transportation impacts by analyzing VMT instead of measures of auto delay such as LOS. This Draft Program EIR incorporates this change and uses VMT findings to make impact determinations later in this document based on guidance provided by the OPR.

VMT measures the total amount of vehicular travel by Service Population (residents, workers, visitors, and others using the local transportation network) for a specific area. Therefore, in this environmental analysis VMT is not capped at the boundaries of the study area but extends beyond the study area to include VMT generated due to residents or jobs located in the study area. VMT is

[3] Note that the additional population and jobs from buildout of the General Plan Update identified in the Transportation section differs from the values included in the Project Description. The difference is a result of the 2019 baseline conditions being used for the Transportation analysis.

an indicator of a city's land use plan and multimodal transportation network. VMT generation is influenced by several local and regional factors that may or may not be affected by city goals, policies, and plans. These factors include, but are not limited to:

- The location of the City within the San Francisco Bay Area region;
- The diversity, density, and location of land uses internal and external to the City;
- Access to destinations (accessibility) and speed of travel/congestion (mobility) along automobile, bicycle, pedestrian, and transit networks;
- Convenience of travel (e.g., parking availability, Wi-Fi availability on transit, lockers/showers at the end of a bicycle trip); and
- Costs of travel (e.g., gas prices, transit fares, auto/bike maintenance costs).

Caltrans submitted comments on the NOP on the topic of VMT. The comments recommended that the Draft Program EIR include a detailed VMT analysis as well as a robust TDM Program, to reduce VMT and GHG. These recommendations are both addressed in this section.

VMT Forecast Methodology

VMT forecasts are prepared for this Draft Program EIR using the C/CAG-VTA Travel Demand Model, a trip-based travel demand model that considers regional land use patterns, approximated highway congestion, and connecting transit service within the nine-county Bay Area region with a focus on San Mateo County. The C/CAG-VTA model was reviewed and updated through a series of diagnostic tests to assess the model's performance and reasonableness within South San Francisco for 2019 conditions. Adjustments were made to land use, roadway network, and transit service to better reflect the base year condition. A 2040 Plus Project scenario was developed that reflects land use and transportation network changes consistent with the South San Francisco General Plan Update.

VMT is calculated by multiplying the number of trips generated by the total distance of each of those trips. One vehicle (regardless of the number of passengers) traveling one mile constitutes one "vehicle mile." This is typically evaluated for the sum of the lengths of all daily weekday trips and can be reported as Total VMT or as an efficiency metric, such as VMT per Employee or VMT per Resident. Both VMT metrics were produced for this Draft Program EIR. VMT estimates include all vehicle types ranging from motorcycle and passenger vehicles to light-duty and heavy-duty trucks. Per capita VMT tends to increase as a result of greater overall economic activity in the region, higher levels of per-household automobile ownership, and/or a jobs/housing imbalance that contributes to longer average commute distances.

VMT Significance Threshold

Consistent with State CEQA Guidelines Section 15064.3 and OPR guidance, the City of South San Francisco has adopted the thresholds of significance set forth in Table 3.14-6 to guide in determining when a project would have a significant transportation impact (South San Francisco Resolution 77-2020).

Table 3.14-6: Vehicle Miles Travel Impact Thresholds

Project Type	Threshold (When Screening Does Not Apply)
Land Use Plan	A significant impact would occur if the plan would result in a net increase in Total VMT *and* VMT per capita[1] exceeds 15 percent below the applicable Baseline VMT[2].
Land Use Project (non-retail)	A significant impact would occur if the VMT[1] for the project exceeds 15 percent below the applicable Baseline VMT[2].
Retail Project	The project would result in a net increase in Total VMT.
Transportation Project	The project would result in a net increase in Total VMT.

Notes:
VMT = Vehicle Miles Traveled
1. VMT to be reported as VMT per Service Population, VMT per resident, or VMT per employee.
2. Baseline VMT is defined as the nine-county Bay Area average for total, residential, or employee VMT in 2019.
Source: South San Francisco Resolution 77-2020.

The General Plan Update is evaluated using the Land Use Plan thresholds: increase in Total VMT *and* VMT per capita greater than 15 percent below the Baseline VMT. The 2019 Existing Conditions scenario is the comparison baseline for this analysis. VMT is evaluated for total Service Population (residents + employees) as well as separately for Home-Based trips and Work-Based trips using the VMT per employee and VMT per Resident metrics, respectively. Existing Conditions VMT and significance thresholds are included in Table 3.14-7. The region has more Home-Based VMT than Work-Based VMT, but the opposite is true in South San Francisco. This is largely because both South San Francisco and San Mateo County have more jobs than working residents and commutes to South San Francisco jobs are longer than the regional average since employees must go farther away to find housing. The thresholds of significance are set 15 percent below the existing regional averages: 23.26 average daily total vehicle miles per Service Population, 11.88 average daily Home-Based vehicle miles per resident, and 12.07 average daily Work-Based vehicle miles per employee. South San Francisco's averages under 2019 Existing Conditions are below the resident threshold and above the Service Population and employee thresholds.

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Table 3.14-7: Existing Regional VMT and Significance Thresholds

Geography	Total VMT	Home-Based VMT	Work-Based VMT	Service Population	Residents	Employees	VMT per Service Population	Service Population Threshold: 15% Below Average	Home-Based VMT per Resident	Home-Based VMT Threshold: 15% Below Average	Work-Based VMT per Employee	Work-Based VMT Threshold: 15% Below Average
9-County Bay Area	360,115,900	121,557,900	63,336,200	13,160,268	8,698,598	4,461,670	27.36	**23.26**	13.97	**11.88**	14.20	**12.07**

Notes:
VMT = Vehicle Miles Traveled
VMT calculations account for all VMT including both light-duty and heavy-duty vehicles.
Source: San Mateo C/CAG-VTA Travel Demand Model, 2019.

VMT Analysis Results

The VMT analysis was prepared using the methodology and approach described in the previous section. Table 3.14-8 presents the Existing and 2040 Plus Project VMT values and population values for South San Francisco. Appendix H details the Total VMT results by speed intervals.

South San Francisco's averages under 2019 Existing Conditions are below the resident threshold and above the Service Population and employee thresholds. Total VMT increases between Existing and 2040 Plus Project. Total Home-Based VMT and total Work-Based VMT follow the same pattern. South San Francisco's employee population and resident population also increase between Existing and 2040 Plus Project conditions.

Table 3.14-8: VMT, Population Totals, and VMT per Capita Compared to Significance Thresholds in South San Francisco

Analysis Scenario	Total VMT	Home-Based VMT	Work-Based VMT	Service Population	Residents	Employees	Total VMT per Service Population	VMT Over (Under) Threshold	Home-Based VMT per Resident	% Over (Under) Threshold	VMT per Employee Threshold	% Over (Under) Threshold
SSF Existing	3,387,200	690,600	936,400	123,500	67,200	56,300	27.42	4.16	10.28	(1.60)	16.62	4.55
SSF 2040 Plus Project	6,585,400	997,400	1,844,000	245,700	108,100	137,600	26.80	3.54	9.23	(2.65)	13.40	1.33

Notes:
VMT = Vehicle Miles Traveled
VMT calculations account for all VMT including both light-duty and heavy-duty vehicles.
Source: San Mateo C/CAG-VTA Travel Demand Model

The per capita results in Table 3.14-8 demonstrate that both residential and employee populations are growing at a faster rate than their respective vehicle miles. As Total VMT increases, the per capita averages decrease due to changing land use and transportation patterns both within South San Francisco and in adjacent cities. Plan Bay Area 2040, which underpins the 2040 Plus Project transportation analysis for this Draft Program EIR (Plan Bay Area 2050 was not yet adopted at the time of analysis), projects substantial housing development in San Mateo County, with the greatest density planned around Transit Corridors, such as Caltrain, BART, and El Camino Real. This development pattern means that commute trip lengths to South San Francisco would be shorter than they are today, and some would be able to shift from auto to transit, bike or walk trips. On the transportation side, plans include increased service for Caltrain and the ferry, which make transit a more desirable travel option than it is today. These changes would occur with or without the proposed project.

The proposed project further densifies and diversifies the land use program in South San Francisco. Denser, more urban environments promote walk, bike, and transit trips especially when major job centers are located adjacent to major transit centers as South San Francisco's BART and Caltrain stations are in the proposed project. Although the General Plan Update policy framework includes TDM updates, TDM programs are not permanent in the same way as built environment factors and instead are tied to tenants, who often turn over during the life of a project. For this reason, the VMT presented in this analysis assumes continuation of the City's current TDM program without the enhancements spelled out in the Mobility Element policy framework. Home-Based VMT per resident is below the significance threshold in all scenarios. Although progress is made with the proposed project in lowering Work-Based VMT per employee and VMT per Service Population, both still would exceed the threshold of significance.

3.14.5 - Thresholds of Significance

According to CEQA Guidelines Appendix G Environmental Checklist, to determine whether transportation and traffic impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the proposed project:

a) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

b) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

d) Result in inadequate emergency access?

3.14.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and proposes mitigation measures where necessary.

Vehicle Miles Traveled

Impact TRANS-1: Implementation of the proposed project would conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).

Development under the proposed would result in additional residential and nonresidential development throughout the Planning Area. Because South San Francisco is a fully built City, new development would primarily occur on parcels that contain existing homes or businesses. The City's primary approach to accommodating growth is to locate new housing and jobs in the East of 101, Lindenville, Downtown, and El Camino planning subareas (Chapter 2, Project Description, Exhibit 2-5), which are well served by Caltrain, BART, or SamTrans service and have good access to opportunity (such as jobs, neighborhood amenities, and health care facilities). The total amounts and differing rates of growth expected among South San Francisco's planning subareas reflect multiple policy goals, such as creating transit-oriented communities near Caltrain and BART and linking housing growth with job access.

Land Use VMT Impact Analysis

The California Resources Board, in both its 2030 Scoping Plan and 2018 Progress Report, conclude that reducing VMT is a key objective to meeting California's GHG emission reduction goals. The Climate Change Action Plan indicates that 44 percent of GHG emissions in South San Francisco under Existing Conditions came from vehicle trips. Future potential development under the proposed project would contribute to an increase in VMT in South San Francisco.

As shown in Table 3.14-8 and Table 3.14-9, Total VMT per Service Population for the City of South San Francisco is forecast to decline from the Existing baseline to 2040 Plus Project conditions but would remain 3.5 average vehicle miles above the corresponding significance threshold. As such, while the proposed project results in a reduction in VMT per Service Population by 2040, the VMT threshold of 15 percent below the current regional average would not be met.

As recommended by City of South San Francisco Resolution 77-2020, partial VMT data was also developed for vehicle trips generated by housing and employment uses and are also evaluated against the 15 percent VMT reduction threshold:

Home-Based VMT per resident in South San Francisco is forecast to decline from the Existing baseline to 2040 Plus Project conditions and would be 2.7 average vehicle miles below the corresponding significance threshold. Therefore, residential development proposed within the General Plan Update would continue to be below the VMT threshold for Home-Based VMT. Most residential growth, under the General Plan Update, would be multi-family units with access to transit along El Camino Real, the new Caltrain station, the San Bruno BART station, or the South San Francisco BART station. These residential units would be within walking distance of jobs, retail uses, and services. As such, the VMT generated by these units would be substantially lower than the overall VMT for current residential units in South San Francisco and contribute to meeting long-term VMT reduction goals for residential uses in the City.

Work VMT per employee in South San Francisco is forecast to decline from the Existing baseline to 2040 Plus Project conditions but would remain 1.3 average vehicle miles above the corresponding

significance threshold. As such, while the proposed project results in a reduction in Work VMT per employee by 2040, the VMT threshold for employment uses would not be met.

Municipal Code and Zoning Ordinance

Chapter 8.73 (Transportation Impact Fee) of the South San Francisco Municipal Code establishes the specifics of a transportation impact fee to require that new developments pay their fair and proportional share of improvements and facilities to accommodate the increased travel demand of new developments and reduce transportation impacts caused by the new development. Section 20.400.005 (Submittal Requirements and Approvals) (revised) of the South San Francisco Zoning Ordinance requires that a project subject to this Ordinance submit TDM documentation with the development application, which includes a completed TDM checklist of the trip reduction measures chosen by the applicant and a description of how the applicable performance requirements would be achieved and maintained over the life of the project.

General Plan Update Policies and Actions

While the proposed project's land use program would contribute to VMT impacts, the proposed policy framework includes goals, policies, and actions to reduce VMT. As described in Section 3.7, Greenhouse Gas Emissions, of this Draft Program EIR, the General Plan Update and Climate Action Plan include numerous policies and actions to contribute to reducing GHG emissions, but do not include quantified VMT reduction programs. As the transportation sector is the largest source of GHG emissions, many of the GHG policies in the proposed project would also result in VMT reductions. The following list of policies and actions from the Mobility Element would directly and indirectly result in the reduction of VMT by managing vehicle trips and incentivizing use of transit and active transportation.

Policy MOB-2-1 Incorporate complete streets improvements into all roadway and development projects.

Action MOB-2.1.1 Complete multimodal design and impact analysis. Ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled.

Action MOB-2.1.2 Create multimodal prioritization processes. Develop Capital Improvement Program (CIP) prioritization criteria to strategically advance multimodal complete streets projects.

Action MOB-2.1.3 Implement Active South City Pedestrian and Bicycle Plan. All capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans.

Action MOB-2.1.4 Implement transit speed, reliability, and access improvements. All capital improvements and development projects near regional transit stations or

bus/shuttle routes incorporate improvements to advance speed, reliability, and access, such as in-lane far-side bus stops, bus-only lanes, queue jumps, and pedestrian/bicycle gap closures.

Policy MOB-2-2 Advance more equitable transportation within South San Francisco.

Action MOB-2.2.2 Develop free bus and shuttle service for residents. Develop a dedicated funding source or leverage private sector contributions to fund the South City shuttle and free bus service for South San Francisco residents.

Policy MOB-3-1 Promote mode shift among employers. Manage the number of vehicle trips, with a focus on promoting mode shift among employers.

Action MOB-3.1.1 Update and implement TDM Ordinance. Implement, monitor, and enforce compliance with the City's TDM Ordinance. Maintain consistency with C/CAG's requirements. Periodically update the TDM Ordinance as transportation conditions change. Incorporate a fine structure for noncompliance.

Action MOB-3.1.2 Implement an East of 101Trip Cap. Implement an East of 101 area trip cap with triennial monitoring and corrective actions if exceeded. Implement project-specific trip caps for large campus developments.

Policy MOB-3-2 Optimize traffic operations on City streets. Optimize traffic operations on City streets while avoiding widening roadways or otherwise pursuing traffic operations changes at expense of multimodal safety, transit reliability, or bicycle and pedestrian comfort.

Action MOB-3.2.1 Update traffic operations metrics. Use appropriate metrics (e.g., travel time, vehicle queues, vehicle delay/level of service, and/or person delay) to evaluate and advance projects that manage traffic flow in coordination with the implementation of complete streets.

Action MOB-3.2.2 Incorporate new street connections. Incorporate new street connections to better distribute vehicle trips across South San Francisco's street network, especially in the East of 101 Area.

Policy MOB-3-3 Right-size parking supply and maximize the efficiency of curb space.

Action MOB-3.3.1 Incorporate parking maximums. Incorporate maximum parking requirements for new residential and office/R&D projects that align with TDM Ordinance trip reduction goals.

Policy MOB-4-1 Increase substantially the proportion of travel using modes other than driving alone.

Action MOB-4.1.1 Use site plan review to improve connectivity. Use the development review process to identify opportunities to enhance bicycle, pedestrian, and transit connectivity.

Action MOB-4.1.2 Expand transit service. Continue collaboration with Caltrain, SamTrans, Water Emergency Transportation Authority (WETA), and shuttle providers to scale service levels in growing areas. Consider independently operated transit services to fill regional transit gaps.

Action MOB-4.1.3 Leverage employee transit subsidies. Leverage private sector subsidies of transit fares to support BART, Caltrain, SamTrans, and Water Emergency Transportation Authority (WETA) ridership.

Action MOB-4.1.4 Incorporate first/last-mile connections. Incorporate first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.

Policy MOB-5-1 Expand the low-stress bike and pedestrian network. Capitalize on opportunities to expand the low-stress bike and pedestrian network throughout the City.

Policy MOB-5-2 Enhance access to the trail network. Enhance access to Centennial Way Trail, Bay Trail, and other trail facilities through streetscape projects and new developments.

While implementation of these policies and actions in the proposed project would support VMT reduction, the forecast VMT reduction in Total VMT Per Service Population and Work-Based VMT Per Employee for the 2040 Plus Project scenario would not be 15 percent below the corresponding average baseline rates for the Bay Area region. As such, the proposed project impact on Total VMT Per Service Population and Work VMT Per Employee is considered potentially significant.

Level of Significance Before Mitigation

Potentially significant impact for Total VMT and Work-Based VMT.

Mitigation Measures

MM TRANS-1 Transportation Demand Management

To reduce VMT, the City shall implement its Transportation Demand Management (TDM) Ordinance as part of the Zoning Code Amendments and parking requirements. The City shall also update its TDM Ordinance and parking requirements every five to ten years and establish an East of 101 Area Trip Cap, to achieve the maximum feasible reductions in vehicle travel. The City shall achieve the performance standards outlined in the TDM Ordinance pursuant to Section 20.400.004 of the Zoning Ordinance.

The City shall review and update its TDM Ordinance every five to ten years to limit Total VMT and Work-Based VMT by incentivizing use of transit and active transportation and disincentivizing auto use. The TDM Ordinance shall cover all development projects generating greater than 100 daily trips, with the most stringent requirements for office/R&D land uses that disproportionately account for the highest rates of VMT in the City. Development projects shall implement a

combination of TDM programs (pursuant to Sections 20.400.003 and 20.400.004 of the Zoning Ordinance), services, and infrastructure improvements, including but not limited to: establishing trip reduction programs; subsidizing transit and active transportation use; coordinating carpooling and vanpooling; encouraging telecommuting and flexible work schedules; designing site plans to prioritize pedestrian, bicycle, and transit travel; funding first/last mile shuttle services; establishing site-specific trip caps; managing parking supply; and constructing transit and active transportation capital improvements. Developments shall be subject to annual reporting and monitoring. The City shall establish a fine structure for developments found to be out of compliance and apply any revenues from fines to infrastructure and services aimed at reducing VMT.

The City shall establish an East of 101 Area Trip Cap to support the monitoring of vehicle trip activity and focus efforts to reduce VMT. The area-wide trip cap shall apply to the high intensity employment uses in the East of 101 Area. The City shall conduct annual traffic counts along the cordon area perimeter. Should the trip cap be reached, the City shall consider corrective actions such as: revising mode share targets for projects subject to the TDM Ordinance, identifying new funding measures for TDM services, implementing new vehicle user charges, creating new street connections, or slowing the pace of development approvals within the cordon zone.

The City shall review and update its parking requirements every five to ten years to align with its TDM Ordinance and East of 101 Area Trip Cap. The City shall establish parking maximums for office/R&D uses to ensure that VMT reduction goals are incorporated into the design of development projects.

Level of Significance After Mitigation

Significant and unavoidable. While impacts would be less than significant for citywide Home-Based VMT Per Resident for residential use without mitigation, impacts with mitigation (MM TRANS-1) for citywide Total VMT Per Service Population and for Work-Based VMT Per Employee would remain significant and unavoidable. Even with the General Plan Update policies and mitigation measures related to the TDM Ordinance, East of 101 Area Trip Cap, and parking requirements, the City may not achieve the overall VMT threshold reduction level due to uncertainty in the cumulative effectiveness of these measures as well as unknowns related to transit service levels, transportation technology, and travel behavior. Moreover, these policies and mitigation measures primarily apply to new developments; existing land uses, and land uses that have already been approved and are under construction are generally not affected. Because of the programmatic nature of the proposed project, no additional mitigation measures are available, and the impact is considered significant and unavoidable.

Road Network Impact VMT Impact Analysis

The threshold for of significance for transportation projects is no net new VMT. There would be a significant impact related to the proposed roadway network if it would cause a net increase in

citywide VMT. Table 3.14-5 lists the major planned mobility improvements that would be implemented between 2020 and 2040 as listed in General Plan Update Action MOB-3.2.2. These improvements include new major road projects that would add approximately 3.2 new lane miles to the existing road system.[4] Building new roadways that increase roadway capacity in congested areas increase network wide VMT by a nearly equivalent proportion within about 10 years. This increase in VMT is called long-term "induced vehicle travel." The magnitude of induced vehicle travel is measured as the elasticity of VMT with respect to lane miles. The National Center for Sustainable Transportation (NCST) recently developed a tool to estimate induced VMT. The 3.2 new lanes miles of added roadway capacity that would be implemented with the proposed project would induce approximately 15.2 million additional VMT per year.

The induced vehicle travel effect due to roadway system expansion is not fully accounted for in travel demand models, so for purposes of this evaluation the induced VMT is considered separately from the VMT shown in Table 3.14-8. In general, travel demand models lack sensitivity to how roadway capacity expansion affects travel speeds that then influence long-term vehicle trip generation and land use growth allocations. As such, the Roadway Network VMT impact would be separate from the Land Use VMT impact described in Land Use VMT Impact discussion. The project impact on VMT due to road network expansion is considered potentially significant in regard to meeting the VMT threshold.

Level of Significance Before Mitigation

Potentially significant impact for road network VMT.

Mitigation Measures

Implement MM TRANS-1.

Level of Significance After Mitigation

Significant and Unavoidable. Even with the implementation of the General Plan Update policies and actions and implementation of Mitigation Measure (MM) TRANS-1, because the effectiveness of VMT reduction strategies cannot be quantified in this programmatic analysis, the City of South San Francisco may not achieve the overall VMT threshold reduction level. This program-level impact does not preclude the finding of less than significant impacts for subsequent development projects that achieve applicable VMT thresholds of significance and/or are able to establish the effectiveness of VMT reduction strategies or other project-specific mitigation measures. However, due to the programmatic nature of the proposed project, no additional mitigation measures are available, and the impact is considered significant and unavoidable.

[4] The new lane miles calculation is limited to the two bridge connections to the East of 101 subarea, which have regional implications for travel. All other new facilities are considered local connections and are anticipated to better distribute trips on the network with the potential to reduce VMT.

Bicycle and Pedestrian System

Impact TRANS-2: Implementation of the proposed project would not conflict with a program, plan, ordinance, or policy of the circulation system regarding bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities, that may have a significant impact on the environment.

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. Additionally, the proposed project may result in other private and public improvements throughout the City that have the potential for environmental effects related to bicycle and pedestrian facilities (see Chapter 2, Project Description, Sections 2.5.2, 2.5.5, and 2.5.6).

Future potential development under the proposed project would contribute to and increase use of bicycle and pedestrian facilities in South San Francisco. The General Plan Update aligns with the Active South City Plan, which seeks to improve bicycle and pedestrian safety and improve mobility options in South San Francisco. The proposed circulation network enhances bicycle and pedestrian facilities citywide, improves connectivity, and shortens walking and biking distances, particularly in growing districts like East of 101 and Lindenville.

General Plan Update Policies and Actions

While growth within South San Francisco would cumulatively contribute to and increase use of bicycle and pedestrian facilities, the General Plan Update includes policies and actions that directly and indirectly result in improving the bicycle and pedestrian network and supporting programs to increase bicycle and pedestrian travel. These include:

Policy MOB-1-1 Use a systemic safety approach to proactively identify and address safety risks.

Action MOB-1.1.1 Develop a Vision Zero Action Plan. Develop and implement a Vision Zero Action Plan that incorporates a prioritization approach for the Capital Improvement Program (CIP) and maintenance response process and identifies safety countermeasures to incorporate into all development projects and capital improvements.

Policy MOB-1-2 Strive to reduce vehicle speeds throughout the City to reduce the frequency and severity of collisions.

Action MOB-1.2.1 Incorporate traffic calming. Incorporate traffic calming treatments into all street projects to support lower design speeds.

Action MOB-1.2.2 Evaluate reducing speed limits. Evaluate reducing speed limits on the City's high injury network, transit priority streets, school areas, and other streets with high concentrations of vulnerable street users.

Policy MOB-2-1 Incorporate complete streets improvements into all roadway and development projects.

Action MOB-2.1.1 Complete multimodal design and impact analysis. Ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled.

Action MOB-2.1.2 Create multimodal prioritization processes. Develop Capital Improvement Program (CIP) prioritization criteria to strategically advance multimodal complete streets projects.

Action MOB-2.1.3 Implement Active South City Pedestrian and Bicycle Plan. All capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans.

Action MOB-2.1.5 Address ADA accessibility. Address ADA accessibility gaps in the City's transportation infrastructure, including at sidewalks, curb ramps, crosswalks, and bus stops.

Policy MOB-2-2 Advance more equitable transportation within South San Francisco.

Action MOB-2.2.1 Implement Safe Routes to Schools program. Collaborate with the South San Francisco Unified School District to implement Safe Routes to Schools programs and improvements, with an emphasis on schools serving equity priority communities.

Action MOB-2.2.3 Incorporate equitable prioritization processes. Incorporate equity in identifying and prioritizing Capital Improvement Program (CIP) transportation projects.

Policy MOB-3-1 Promote mode shift among employers. Manage the number of vehicle trips, with a focus on promoting mode shift among employers.

Action MOB-3.1.1 Update and implement TDM Ordinance. Implement, monitor, and enforce compliance with the City's TDM Ordinance. Maintain consistency with C/CAG's requirements. Periodically update the TDM Ordinance as transportation conditions change. Incorporate a fine structure for noncompliance.

Policy MOB-3-2 Optimize traffic operations on City streets. Optimize traffic operations on City streets while avoiding widening roadways or otherwise pursuing traffic operations changes at expense of multimodal safety, transit reliability, or bicycle and pedestrian comfort.

Action MOB-3.2.2 Incorporate new street connections. Incorporate new street connections to better distribute vehicle trips across South San Francisco's street network, especially in the East of 101 Area.

Policy MOB-3-3 Right-size parking supply and maximize the efficiency of curb space.

Action MOB-3.3.2 Evaluate curb management practices. Evaluate the current and best use of curb space in the City's activity centers and repurpose space to maximize people served (i.e., for loading, bikeways, bike parking, bus lanes, or parklets).

Policy MOB-4-1 Increase substantially the proportion of travel using modes other than driving alone.

Action MOB-4.1.1 Use site plan review to improve connectivity. Use the development review process to identify opportunities to enhance bicycle, pedestrian, and transit connectivity.

Action MOB-4.1.4 Incorporate first/last-mile connections. Incorporate first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.

Policy MOB-5-1 Expand the low-stress bike and pedestrian network. Capitalize on opportunities to expand the low-stress bike and pedestrian network throughout the City.

Action MOB-5.1.1 Complete rails to trails projects. Leverage public-private partnerships to complete the conversion of the City's freight rail lines to multiuse trails.

Action MOB-5.1.2 Develop Bikeways and slow streets. Grow network of low-stress bikeways and Slow Streets that prioritize direct access to recreation and active transportation within the City's residential neighborhoods.

Action MOB-5.1.3 Expand bicycle parking at activity centers. Expand bicycle parking at major activity centers throughout the City.

Policy MOB-5-2 Enhance access to the trail network. Enhance access to Centennial Way Trail, Bay Trail, and other trail facilities through streetscape projects and new developments.

Implementation of these General Plan Update policies and actions of the proposed project would improve the bicycle and pedestrian network and support programs to increase bicycle and pedestrian travel and ensure that the proposed project would not conflict with a program, plan, ordinance, or policy of the circulation system regarding bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Impacts would be less than significant.

Furthermore, actions identified in the Climate Action Plan, including Actions TL 2.5 (Development along Transit Corridors) and TL 2.6 (Complete Streets Policy), would enhance the bicycle and pedestrian network. Implementation of Action TL 2.5 would ensure that all new land use and transportation projects adhere to the City's VMT Analysis Guidelines and qualitatively assess the project's effect on multimodal access. Action TL 2.5 includes use of the development review process to identify opportunities to enhance bicycle, pedestrian, and transit connectivity. Implementation of

Action TL 2.6 would ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users and that development projects contribute to multimodal improvements in proportion to their potential impacts on VMT. Further, Action TL 2.6 includes the development of a Capital Improvement Program (CIP) prioritization criteria, including equity considerations for SB 1000 neighborhoods, to strategically advance multimodal complete streets projects. Lastly, Action TL 2.6 would ensure that all capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, include rules and regulations that assist in reducing impacts related to bicycle and pedestrian facilities. One specific purpose of Chapter 20.400 (Transportation Demand Management) (revised) is to promote more efficient utilization of existing transportation facilities and ensure that new developments maximize transit, active transportation, carpooling, and vanpooling usage. Section 20.400.005 (Submittal Requirements and Approvals) (revised) requires that a project subject to the TDM Ordinance submit TDM documentation with the development application, which includes a completed TDM checklist of the trip reduction measures chosen by the applicant and a description of how the applicable performance requirements would be achieved and maintained over the life of the project. The trip reduction measures identified in Section 20.400.003 (Trip Reduction Measures and Requirements) (revised) related to bicycle and pedestrian facilities include the provision of bicycle storage, showers, and lockers, providing bicycle and pedestrian-oriented site access, providing on-site pedestrian-oriented amenities, providing active transportation subsidies, providing cash reward incentives for commuting via walking or biking, and providing a bicycle repair station. Further, Section 20.330.007 (Bicycle Parking) (revised) establishes short-term and long-term bicycle parking requirements for new buildings and land uses, reconstruction, expansion, and change in the use of nonresidential buildings, additions and alternations to existing dwelling units, and alterations that increase the number of dwelling units.

Level of Significance

Less than significant impact.

Transit System

Impact TRANS-3:	**Implementation of the proposed project would not conflict with a program, plan, ordinance, or policy of the circulation system regarding transit facilities, or otherwise decrease the performance or safety of such facilities, that may have a significant impact on the environment.**

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. Additionally, the proposed project may result in other private and public improvements throughout the City that have the potential for environmental effects related to transit facilities (see Chapter 2, Project Description, Sections 2.5.2, 2.5.5, and 2.5.6).

Future potential development under the proposed project would increase use of transit service and transit facilities in South San Francisco. Adding residents and jobs near transit increases the number of destinations that can be easily served via transit. Pairing transit-oriented development with improvements to transit access and street designs supports ridership growth for rail, bus, shuttle, and ferry services. Increased demand for transit is beneficial to the environment and does not constitute an impact.

General Plan Update Policies and Actions

While growth within South San Francisco would cumulatively contribute to and increase use of transit, the General Plan Update includes policies and actions that directly and indirectly result in improving the transit network and supporting an increase in transit use. These include:

Policy MOB-2-1 Incorporate complete streets improvements into all roadway and development projects.

Action MOB-2.1.1 Complete multimodal design and impact analysis. Ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled.

Action MOB-2.1.2 Create multimodal prioritization processes. Develop Capital Improvement Program (CIP) prioritization criteria to strategically advance multimodal complete streets projects.

Action MOB-2.1.4 Implement transit speed, reliability, and access improvements. All capital improvements and development projects near regional transit stations or bus/shuttle routes incorporate improvements to advance speed, reliability, and access, such as in-lane far-side bus stops, bus-only lanes, queue jumps, and pedestrian/bicycle gap closures.

Action MOB-2.1.5 Address ADA accessibility. Address ADA accessibility gaps in the City's transportation infrastructure, including at sidewalks, curb ramps, crosswalks, and bus stops.

Policy MOB-2-2 Advance more equitable transportation within South San Francisco.

Action MOB-2.2.2 Develop free bus and shuttle service for residents. Develop a dedicated funding source or leverage private sector contributions to fund the South City shuttle and free bus service for South San Francisco residents.

Action MOB-2.2.3 Incorporate equitable prioritization processes. Incorporate equity in identifying and prioritizing Capital Improvement Program (CIP) transportation projects.

Policy MOB-3-1 Promote mode shift among employers. Manage the number of vehicle trips, with a focus on promoting mode shift among employers.

Action MOB-3.1.1 Update and implement TDM Ordinance. Implement, monitor, and enforce compliance with the City's TDM Ordinance. Maintain consistency with C/CAG's requirements. Periodically update the TDM Ordinance as transportation conditions change. Incorporate a fine structure for noncompliance.

Policy MOB-3-2 Optimize traffic operations on City streets. Optimize traffic operations on City streets while avoiding widening roadways or otherwise pursuing traffic operations changes at expense of multimodal safety, transit reliability, or bicycle and pedestrian comfort.

Action MOB-3.2.2 Incorporate new street connections. Incorporate new street connections to better distribute vehicle trips across South San Francisco's street network, especially in the East of 101 Area.

Policy MOB-3-3 Right-size parking supply and maximize the efficiency of curb space.

Action MOB-3.3.2 Evaluate curb management practices. Evaluate the current and best use of curb space in the City's activity centers and repurpose space to maximize people served (i.e., for loading, bikeways, bike parking, bus lanes, or parklets).

Policy MOB-4-1 Increase substantially the proportion of travel using modes other than driving alone.

Action MOB-4.1.1 Use site plan review to improve connectivity. Use the development review process to identify opportunities to enhance bicycle, pedestrian, and transit connectivity.

Action MOB-4.1.2 Expand transit service. Continue collaboration with Caltrain, SamTrans, Water Emergency Transportation Authority (WETA), and shuttle providers to scale service levels in growing areas. Consider independently operated transit services to fill regional transit gaps.

Action MOB-4.1.3 Leverage employee transit subsidies. Leverage private sector subsidies of transit fares to support BART, Caltrain, SamTrans, and Water Emergency Transportation Authority (WETA) ridership.

Action MOB-4.1.4 Incorporate first/last-mile connections. Incorporate first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.

Implementation of these General Plan Update policies and actions would improve the transit network and support programs to increase travel by transit. For example, improving overall street connectivity, expanding transit service, providing additional sidewalks and crosswalks, and incorporating first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations would improve access to transit throughout the City. Programs, such as developing a free bus and shuttle service for residents and leveraging employee

transit subsidies, would provide incentives for people to access and use transit. Therefore, implementation of the proposed project would not conflict with a program, plan, ordinance, or policy of the circulation system regarding transit systems or otherwise decrease the performance or safety of such facilities. Impacts would be less than significant.

Furthermore, actions identified in the Climate Action Plan, including Actions TL 2.5 (Development along Transit Corridors), TL 2.6 (Complete Streets Policy), and TL 2.8 (Improve Transit Station Access), would enhance the transit network. Implementation of Action TL 2.5 would ensure that all new land use and transportation projects adhere to the City's VMT Analysis Guidelines and qualitatively assess the project's effect on multimodal access. Action TL 2.5 includes use of the development review process to identify opportunities to enhance bicycle, pedestrian, and transit connectivity. Implementation of Action TL 2.6 would ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled. Further, Action TL 2.6 includes the development of a CIP prioritization criteria, including equity considerations for SB 1000 neighborhoods, to strategically advance multimodal complete streets projects. Implementation of Action TL 2.6 would ensure that all capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans. Lastly, implementation of Action TL 2.8 would include leveraging public-private partnerships to increase transit ridership and improve transit station access by incorporating first/last mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, includes rules and regulations that would enhance transit facilities. One specific purpose of Chapter 20.400 (Transportation Demand Management) (revised) is to promote more efficient utilization of existing transportation facilities and ensure that new developments maximize transit, active transportation, carpooling, and vanpooling usage. Section 20.400.005 (Submittal Requirements and Approvals) (revised) requires that a project subject to the TDM Ordinance submit TDM documentation with the development application, which includes a completed TDM checklist of the trip reduction measures chosen by the applicant and a description of how the applicable performance requirements would be achieved and maintained over the life of the project. The trip reduction measures identified in Section 20.400.003 (Trip Reduction Measures and Requirements) (revised) related to transit facilities include participation in Commute.org, or equivalent program, providing transit pass subsidies and pre-tax transit benefits, providing cash reward incentives for commuting via transit, and making improvements to the transit system (e.g., bus-only lanes, bus/shuttle stop, bus/shuttle shelter, wayfinding signage).

Level of Significance

Less than significant impact.

Roadway Safety

Impact TRANS-4: Implementation of the proposed project could substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Future potential development under the proposed project would modify the existing transportation network to accommodate existing and future users that could change existing travel patterns or traveler expectations. The City of South San Francisco requires that the modification of existing public facilities and the construction of new facilities comply with the applicable design standards contained in the California Manual on Uniform Traffic Control Devices (MUTCD) and the California Highway Design Manual, which have been developed to minimize the potential for conflicts or collisions. To accommodate the additional population and jobs, the proposed project contemplates 25 circulation improvements listed in Table 3.14-5. The proposed improvements would also be designed to comply with the California MUTCD and the City's design guidelines. Additionally, the proposed project designates truck routes. The official designation of truck routes would direct heavy vehicles to roadways that are suited for such travel. Likewise, it would promote avoidance of neighborhood streets that are poorly suited for heavy vehicle traffic. There are no regulations identified in the Zoning Code Amendments and no actions identified in the Climate Action Plan related to roadway safety.

General Plan Update Policies and Actions

While growth within South San Francisco would result in changes to the existing transportation network, the General Plan Update includes goals, policies, and actions to support the design of a transportation system that is safe for all modes of travel. The following describes the policies and actions that directly and indirectly result in improving the transportation network.

Policy MOB-1-1 Use a systemic safety approach to proactively identify and address safety risks.

Action MOB-1.1.1 Develop a Vision Zero Action Plan. Develop and implement a Vision Zero Action Plan that incorporates a prioritization approach for the Capital Improvement Program (CIP) and maintenance response process and identifies safety countermeasures to incorporate into all development projects and capital improvements.

Policy MOB-1-2 Strive to reduce vehicle speeds throughout the City to reduce the frequency and severity of collisions.

Action MOB-1.2.1 Incorporate traffic calming. Incorporate traffic calming treatments into all street projects to support lower design speeds.

Action MOB-1.2.2 Evaluate reducing speed limits. Evaluate reducing speed limits on the City's high injury network, transit priority streets, school areas, and other streets with high concentrations of vulnerable street users.

Policy MOB-2-1 Incorporate complete streets improvements into all roadway and development projects.

Action MOB-2.1.1 Complete multimodal design and impact analysis. Ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled.

Action MOB-2.1.5 Address ADA accessibility. Address ADA accessibility gaps in the City's transportation infrastructure, including at sidewalks, curb ramps, crosswalks, and bus stops.

Policy MOB-3-2 Optimize traffic operations on City streets. Optimize traffic operations on City streets while avoiding widening roadways or otherwise pursuing traffic operations changes at expense of multimodal safety, transit reliability, or bicycle and pedestrian comfort.

Action MOB-3.2.1 Update traffic operations metrics. Use appropriate metrics (e.g., travel time, vehicle queues, vehicle delay/level of service, and/or person delay) to evaluate and advance projects that manage traffic flow in coordination with the implementation of complete streets.

Action MOB-3.2.2 Incorporate new street connections. Incorporate new street connections to better distribute vehicle trips across South San Francisco's street network, especially in the East of 101 Area .

Policy MOB-5-1 Expand the low-stress bike and pedestrian network. Capitalize on opportunities to expand the low-stress bike and pedestrian network throughout the City.

Level of Significance Before Mitigation

Implementation of the proposed project would enhance safety on local streets and would not increase hazards due to a design feature or incompatible uses. However, implementation of the proposed project would also increase vehicle trips on the City's freeway ramps, which would exacerbate vehicle queues on off-ramps that already experience queues exceeding storage capacity. Table 3.14-9 presents specifics on the off-ramps that exceed storage under background conditions (i.e., prior to buildout of the General Plan Update). Therefore, the impact would be considered potentially significant.

Table 3.14-9: VMT and Population Totals in South San Francisco

Local Off-Ramps that Exceed Capacity Under Background Conditions	Proposed Project Adds Vehicle to the Queue
101 NB/Dubuque Avenue Offramp	Yes
101 SB/Gateway Boulevard/Oyster Pt. Boulevard Offramp	Yes
Airport Boulevard/Miller Avenue/US-101 SB Offramp	Yes

Local Off-Ramps that Exceed Capacity Under Background Conditions	Proposed Project Adds Vehicle to the Queue
South Airport Boulevard/US-101 On- and Off-Ramps/Wondercolor Lane	Yes
South Airport Boulevard/I-380 Eastbound ramp	Yes
Source: Genentech Master Plan Update EIR (queues exceed capacity under Exiting and/or Existing Plus Project condition), San Mateo C/CAG-VTA Travel Demand Model	

Mitigation Measures

MM TRANS-4 Freeway Offramp Queue Improvements

To minimize queueing hazards, the City shall work with Caltrans to develop improvement measures for freeway off-ramps and adjacent intersections that help manage offramp queues. These measures may include geometric changes, changes to signal timing and phasing, and new connections as identified in Table 3.14-5. Such improvement measures shall not adversely affect pedestrian, bicycle, and transit conditions or otherwise undermine the City's VMT mitigation efforts described in MM TRANS-1. MM TRANS-1 is also applicable here and should be implemented to minimize freeway offramp queues.

Level of Significance After Mitigation

Significant and unavoidable. Even with the implementation of General Plan Update policies and actions and implementation of MMs TRANS-4 and TRANS-1, given the uncertainty around specific operational conditions and ability to mitigate such conditions in a constrained right-of-way, this impact remains significant and unavoidable. However, due to the programmatic nature of the proposed project, no additional mitigation measures are available, and the impact is considered significant and unavoidable.

Emergency Access

Impact TRANS-5: Implementation of the proposed project would not result in inadequate emergency access.

Future potential development under the proposed project would alter land use patterns and increase travel demand on the transportation network that may influence emergency access. To accommodate the additional population and jobs, the proposed project includes 25 circulation improvements listed in Table 3.14-5. The proposed improvements would increase connectivity in the network, which in turn, would promote improved emergency access. Additionally, new development that occurs pursuant to the proposed project would be subject to the provisions of the California Fire Code including those that pertain to emergency access. Impacts would be less than significant.

The South San Francisco Fire Department responds from five fire stations throughout the City. These stations are located to allow for adequate response times and overlapping coverage to multiple emergencies. The City of South San Francisco is also the only city in San Mateo County to have an exclusive operating area for emergency medical transport, staffing two 24-hour advance life support

ambulances and one 12-hour per day basic life support ambulance. Additionally, the department maintains the Emergency Operations Center (EOC) at 490 North Canal Street. The South San Francisco Police Department operates out of a new police headquarters that also provides a backup EOC in the City Civic Center Campus at 1 Chestnut Avenue.

General Plan Update Policies and Actions

Multiple policies and actions in the Mobility Element and in other sections of the proposed project support the maintenance of adequate emergency access, including:

Policy MOB-2-1 Incorporate complete streets improvements into all roadway and development projects.

Action MOB-2.1.1 Complete multimodal design and impact analysis. Ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled.

Action MOB-2.1.4 Implement transit speed, reliability, and access improvements. All capital improvements and development projects near regional transit stations or bus/shuttle routes incorporate improvements to advance speed, reliability, and access, such as in-lane far-side bus stops, bus-only lanes, queue jumps, and pedestrian/bicycle gap closures.

Policy MOB-3-2 Optimize traffic operations on City streets. Optimize traffic operations on City streets while avoiding widening roadways or otherwise pursuing traffic operations changes at expense of multimodal safety, transit reliability, or bicycle and pedestrian comfort.

Action MOB-3.2.1 Update traffic operations metrics. Use appropriate metrics (e.g., travel time, vehicle queues, vehicle delay/level of service, and/or person delay) to evaluate and advance projects that manage traffic flow in coordination with the implementation of complete streets.

Action MOB-3.2.2 Incorporate new street connections. Incorporate new street connections to better distribute vehicle trips across South San Francisco's street network, especially in the East of 101 Area.

Policy SA-16.4 Coordinate with the South San Francisco Unified School District and public services, including the South San Francisco Fire Department and the South San Francisco Police Department, to ensure public services can accommodate growth impacts of new development in the East of 101 Area.

Policy SA-22.7 Coordinate with the South San Francisco Unified School District and public services, including the South San Francisco Fire Department and the South San Francisco Police Department, to ensure public services can accommodate growth impacts of this new development in Lindenville.

Action ECS-6.1.1 Maintain community fire stations. Maintain equitable distribution of Fire Stations so that each neighborhood is equally and adequately served.

Action CR-1.6.5 Maintain evacuation route plans. Maintain and communicate evacuation route plans for businesses and residents.

Action CR-2.4.1 Conduct Fire Station 61 and 62 relocation feasibility study. Evaluate the feasibility of relocating Fire Station 61 and 62 outside of the flood zone.

Policy CR-5.3 Expand access to evacuation and early warning technology for wildfire. Increase community participation and understanding of evacuation and early warning software programs to minimize threat to life and be better prepared in case of a wildfire event.

Furthermore, actions identified in the Climate Action Plan, including Actions TL 2.3 (Improve Curb Management) and TL 2.6 (Complete Streets Policy), would support the maintenance of adequate emergency access. Implementation of Action TL 2.3 would improve curb management by evaluating the current and best use of curb space in the City's activity centers and repurposing space to maximize people served (i.e., for loading, bikeways, bike parking, bus lanes, EV charging, or parklets). Implementation of Action TL 2.6 would ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled.

The South San Francisco Zoning Ordinance, including the Zoning Code Amendments that are part of the proposed project, include rules and regulations to reduce impacts related to emergency access. Two specific purposes of Chapter 20.400 (Transportation Demand Management) (revised) are to reduce the number of VMT generated by new development and in accordance with the City's police power necessary to protect the public health, safety, welfare, and environment and to manage traffic congestion, especially congestion associated with drive-alone commute trips during peak traffic periods by using a combination of services, incentives, and facilities. Section 20.400.005 (Submittal Requirements and Approvals) (revised) requires that a project subject to the TDM Ordinance submit TDM documentation with the development application, which includes a completed TDM checklist of the trip reduction measures chosen by the applicant and a description of how the applicable performance requirements would be achieved and maintained over the life of the project. The trip reduction measures identified in Section 20.400.003 (Trip Reduction Measures and Requirements) (revised) that promote carpooling and the use of transit, pedestrian facilities, and bicycle facilities, would assist in reducing the number of vehicles on the road, thereby reducing traffic congestion throughout the City that could impede emergency access.

Level of Significance

Less than significant impact.

3.14.7 - Cumulative Impacts

The geographic scope of the cumulative impact analysis for transportation is the nine Bay Area counties (San Mateo, San Francisco, Santa Clara, Marin, Sonoma, Napa, Solano, Alameda, and Contra Costa). This analysis evaluates whether the impacts of the proposed project, together with the impacts of cumulative development, would result in a cumulatively significant impact related to transportation. This analysis then considers whether incremental contribution to cumulative impacts associated with the implementation of the proposed project would be significant. Both conditions must apply for a project's cumulative effects to rise to a level of significance.

Vehicle Miles Traveled

Cumulative projects in the nine-county Bay Area may generate new VMT, which would be added to the roadway network within the geographic context. All cumulative projects would be required to comply with County and local ordinances and General Plan policies that address VMT, as well as mitigate their fair share of impacts related to VMT. Nonetheless, the proposed project, in conjunction with other past, present, and future projects, would have a cumulatively significant impact related to VMT.

Future potential development under the proposed project would contribute to an increase in VMT in the Planning Area as shown in Table 3.14-8. Buildout of the proposed project is assumed over a 20-year project horizon. Development that would be accommodated by the proposed project would generate a net increase of Total VMT at project buildout. As discussed under Impact TRANS-1, implementation of the proposed project would result in a decrease in citywide VMT per Service Population and Work-Based VMT per employee in horizon year 2040 from existing baseline but would not be 15 percent below the baseline nine-county regional average. The Home-Based VMT per resident, a measure of VMT for residential uses, would be 15 percent below the baseline nine-county regional average. The proposed project would implement MM TRANS-1, which would require the City to implement its TDM Ordinance as part of the Zoning Code Amendments and parking requirements to reduce project-generated VMT. MM TRANS-1 also requires the City to update its TDM Ordinance and parking requirements every five to ten years and establish an East of 101 Area Trip Cap, to achieve the maximum feasible reductions in vehicle travel. However, even with incorporation of MM TRANS-1 which would partially reduce VMT impacts, the impacts would remain significant and unavoidable. As the proposed project's impacts related to VMT are significant and unavoidable, the proposed project's incremental contribution to the cumulative impact is significant and the proposed project's contribution to cumulative VMT impacts would be cumulatively considerable, resulting in in a significant and unavoidable cumulative impact related to VMT.

Bicycle and Pedestrian System

Cumulative projects in the nine-county Bay Area would be required to provide adequate bicycle and pedestrian facilities and comply with the programs and policies supporting alternative transportation in planning level documents. Accordingly, there is a less than significant cumulative impact to the bicycle and pedestrian system.

As described under Impact TRANS-2, while the proposed project would generate new demand for bicycle and pedestrian facilities that serve the area, the General Plan Update aligns with the Active South City Plan, which seeks to improve bicycle and pedestrian safety and improve mobility options

in South San Francisco. The proposed circulation network enhances bicycle and pedestrian facilities citywide, improves connectivity, and shortens walking and biking distances, particularly in growing districts like East of 101 and Lindenville. In addition, the policies and actions of the General Plan Update improve the bicycle and pedestrian network and support programs to increase bicycle and pedestrian travel and ensure that impacts remain less than significant. Therefore, the proposed project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to bicycle and pedestrian facilities.

Transit System

Cumulative projects in the nine-county Bay Area would be required to provide appropriate public transit. All cumulative projects would be required to comply with local ordinances and General Plan policies that address potential impacts related to the transit system. For these reasons, cumulative impacts with respect to transportation and traffic would be less than significant. As described under Impact TRANS-3, while the proposed project would generate new demand for the transit services and facilities that serve the area, transit system and vehicle capacities are not expected to be exceeded and impacts to transit are less than significant. Therefore, the proposed project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to public transit.

Roadway Safety

Impacts related to roadway safety and traffic hazards due to design features are generally site specific. For example, the potential roadway safety issues or traffic hazards related to the design of an intersection are specific to that particular intersection. Accordingly, cumulative impacts related geometric design features are less than significant. Additionally, while other cumulative projects in the nine-county Bay Area may generate new VMT, which would be added to the roadway network, potentially increasing vehicle trips on the City's freeway ramps, which would cause vehicle queues to exceed offramp storage capacity or exacerbate off-ramps that already experience offramp queues exceeding storage capacity, those impacts would be limited to the immediate location. All cumulative projects would be required to mitigate for their impacts, as well as ensure that roadway safety is maintained, and comply with applicable policies in local and regional planning documents. Nonetheless, there would remain a cumulatively significant impact related to roadway safety.

As discussed under Impact TRANS-4, development under the proposed project would modify the existing transportation network to accommodate existing and future users that could change existing travel patterns or traveler expectations. While growth within South San Francisco would result in changes to the existing transportation network, the General Plan Update includes goals, policies, and actions to support the design of a transportation system that is safe for all modes of travel. However, implementation of the proposed project would also increase vehicle trips on the City's freeway ramps, which would cause vehicle queues to exceed offramp storage capacity or exacerbate off-ramps that already experience offramp queues exceeding storage capacity. The proposed project would implement MM TRANS-4, which would require the City to work with Caltrans to develop improvement measures for freeway off-ramps and adjacent intersections that help manage offramp queues. Implementation of MM TRANS-1 would also assist in minimizing freeway offramp queues.

However, even with incorporation of MMs TRANS-4 and TRANS-1, the impacts would remain significant and unavoidable.

As the proposed project's impacts to the City's freeway ramps are significant and unavoidable, the proposed project's incremental contribution to the cumulative impact is considered significant and the proposed project's contribution to roadway safety cumulative impacts would be cumulatively considerable, resulting in a significant and unavoidable cumulative impact related to roadway safety.

Emergency Access

Cumulative projects in the nine-county Bay Area that result in similar impacts would be required to mitigate for their impacts, as well as ensure that emergency access is maintained. Accordingly, there is a less than significant cumulative impact. As described in Impact TRANS-5, the proposed project would not result in inadequate emergency access. As such, the proposed project, in conjunction with other projects, would have a less than significant cumulative impact associated with emergency access.

Level of Cumulative Significance Before Mitigation

Potentially significant impact.

Cumulative Mitigation Measures

Implement MM TRANS-1 and TRANS-4.

Level of Cumulative Significance After Mitigation

A **significant and unavoidable cumulatively considerable contribution** to the existing cumulative VMT impact would occur even with mitigation incorporated. Even with the General Plan Update policies and mitigation measures related to the TDM Ordinance, East of 101 Area Trip Cap, and parking requirements, the City may not achieve the overall VMT threshold reduction level due to uncertainty in the cumulative effectiveness of these measures as well as unknowns related to transit service levels, transportation technology, and travel behavior. Moreover, these policies and mitigation measures primarily apply to new developments; existing land uses, and land uses that have already been approved and are under construction are generally not affected. Because of the programmatic nature of the proposed project, no additional mitigation measures are available, and the impact is considered significant and unavoidable.

Significant and unavoidable cumulatively considerable contribution to the existing cumulative roadway safety impact would occur even with mitigation incorporated. Even with the implementation of General Plan Update policies and actions and implementation of MM TRANS-4, given the uncertainty around specific operational conditions and ability to mitigate such conditions in a constrained right-of-way, this impact remains significant and unavoidable. However, due to the programmatic nature of the proposed project, no additional mitigation measures are available, and the impact is considered significant and unavoidable.

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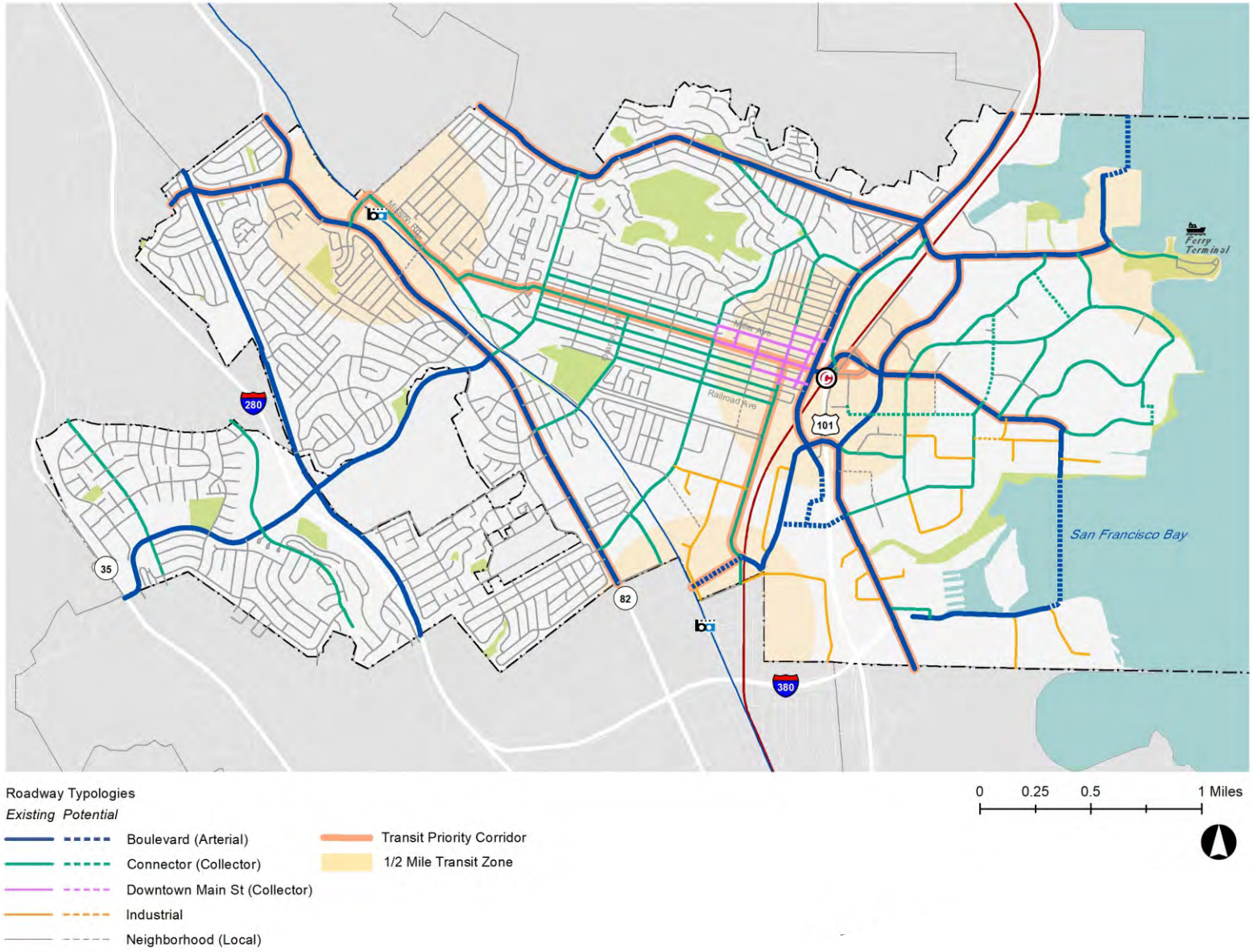

Source: SHAPE South San Francisco, November 2021.

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Exhibit 3.14-1
Existing and Proposed Roadway Network

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3.15 - Utilities and Service Systems

3.15.1 - Introduction

This section of the Draft Program Environmental Impact Report (Draft Program EIR) addresses potential environmental effects related to utilities and service systems within the South San Francisco General Plan Update Planning Area (Planning Area) resulting from implementation of the General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project). Future discretionary projects facilitated by the proposed project would be evaluated for project-specific impacts related to utilities and service systems at the time they are proposed.

The following comments related to Utilities and Service Systems were received in response to the Notice of Preparation (NOP). The comment letters are included in Appendix A.

- Recommends that the Draft Program EIR include information about the San Francisco Public Utilities Commission (SFPUC) project review process and the General Plan Update's consistency with applicable SFPUC plans, policies, and guidelines.
- Suggests that a mandate be instated for inspection of Pacific Gas and Electric Company (PG&E) underground natural gas lines throughout the City.
- Recommends that the Draft Program EIR evaluate land uses and infrastructure within the two unincorporated islands, including sewer and right-of-way improvements.

The descriptions and analysis in this section are based, in part, on statements, data, and figures provided by the following reference materials:

- 2020 Urban Water Management Plan, California Water Service, South San Francisco District, June 2021.
- 2020 Urban Water Management Plan, Westborough Water District, June 2021.
- Sewer System Management Plan, City of South San Francisco, November 2019.
- California Department of Resources Recycling and Recovery website.

3.15.2 - Environmental Setting

Water Supply and Demand

The City is served by two water providers: California Water Service Company (Cal Water) South San Francisco District and Westborough Water District (WWD). Cal Water provides water service for most of the City while WWD provides water to the Westborough neighborhood. Each water provider is discussed separately.

Cal Water South San Francisco District

The Cal Water South San Francisco District is a subsidiary of the larger, investor-owned, publicly regulated California Water Service Group. The South San Francisco District (see Exhibit 3.15-1) is one

of 25 private water districts in California owned and operated by the California Water Service Group. Cal Water obtains its potable water supply from purchased water and groundwater produced from its own wells.

The Cal Water South San Francisco District provides potable water to most of the City of South San Francisco, the Town of Colma, a portion of the City of Daly City, and the unincorporated community of Broadmoor. The South San Francisco District boundaries encompasses the Bay Plain and the northern foothills of the Coastal Range. The South San Francisco District is bounded on the north by San Bruno Mountain, on the west and northwest by Daly City, on the south by the City of San Bruno and on the east by the San Francisco Bay. The population of the South San Francisco District was estimated to be 63,319 in 2020.

The South San Francisco District has more than 16,000 service connections. Residential customers account for 86 percent of the service connections, followed by commercial at 12 percent. Industrial, government, and other users account for the remaining 2 percent. The South San Francisco District water distribution system consists of five groundwater wells, 21 booster pumps, 12 storage tanks, and 144 miles of pipeline.[1]

Purchased Water

The majority of the water supply to the South San Francisco District (i.e., approximately 80 percent from 2005-2019, not inclusive of in-lieu surface water deliveries) is treated water purchased from the City and County of San Francisco's Regional Water System (RWS), which is operated by the SFPUC. Approximately 85 percent of the water supply to the SFPUC RWS originates in the Hetch Hetchy watershed, located in Yosemite National Park, and flows down the Tuolumne River into the Hetch Hetchy Reservoir. Water from the Hetch Hetchy watershed is managed through the Hetch Hetchy Water and Power Project. The remaining 15 percent of the water supply to the SFPUC RWS originates locally in the Alameda and Peninsula watersheds and is stored in six different reservoirs in Alameda and San Mateo Counties. The water purchased is treated by SFPUC prior to delivery to Cal Water. The South San Francisco District takes delivery from SFPUC from 11 active and three standby metered turnouts from SFPUC transmission lines.

Cal Water has an annual purchased water supply from SFPUC of 35.68 million gallons in normal hydrologic years, which is shared among the Cal Water Bear Gulch, Mid-Peninsula, and South San Francisco Districts. The amount available to the South San Francisco District in any given year varies and depends on the availability of local supplies both in Bear Gulch and South San Francisco Districts.

The amount of imported water available to the SFPUC's retail and wholesale customers is constrained by hydrology, physical facilities, and the institutional parameters that allocate the water supply of the Tuolumne River. Because of these constraints, the SFPUC is very dependent on reservoir storage to firm up its water supplies.

[1] California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. South San Francisco District. Website: https://www.calwater.com/docs/uwmp2020/SSF_2020_UWMP_FINAL.pdf. Accessed April 20, 2022.

Groundwater

Cal Water has historically pumped groundwater from the Westside Basin to supplement the supply from SFPUC. Cal Water operates five wells within the South San Francisco District boundaries. Table 3.15-1 summarizes groundwater production between 2016 and 2020.

Table 3.15-1: South San Francisco District Groundwater Production (2016-2020)

Year (acre-feet)				
2016	**2017**	**2018**	**2019**	**2020**
1,390	1,535	1,535	1,535	1,539
Source: California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. South San Francisco District. June.				

Groundwater has historically supplied 10 to 15 percent of the South San Francisco District's water demand. It is extracted from the Merced Formation of the Colma Creek Basin, a subbasin of the Merced Valley Groundwater Basin. Locally this basin is referred to as the Westside Basin.

The Westside Basin is the largest groundwater basin in the San Francisco Bay Hydrologic Region. It is separated from the Lobos Basin to the north by a northwest trending bedrock ridge through the northeastern part of Golden Gate Park. The San Bruno Mountains bound the basin on the east. The San Andreas Fault and Pacific Ocean form its western boundary and its southern limit is defined by bedrock that separates it from the San Mateo Plain Groundwater Basin. The basin opens to the Pacific Ocean on the northwest and San Francisco Bay on the southeast.[2]

Water Supply Projections

The projected water supply for the South San Francisco District through 2045 is summarized in Table 3.15-2.

Table 3.15-2: South San Francisco District Supply Projections

Source	Year (acre-feet)				
	2025	**2030**	**2035**	**2040**	**2045**
Purchased Water	6,009	5,949	6,101	6,466	6,889
Groundwater	1,534	1,534	1,534	1,534	1,534
Total	**7,543**	**7,483**	**7,635**	**8,000**	**8,423**
Source: California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. South San Francisco District. June.					

[2] California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. South San Francisco District. June.

Water Demand

The South San Francisco District demanded 6,936 acre-feet of water in 2020. Table 3.15-3 summarizes the South San Francisco District's future water demand projections through 2045. The demand projections match the supply values shown in Table 3.15-2, signifying that Cal Water anticipates that adequate water supplies will be available during normal water years through 2045. Cal Water's 2020 Urban Water Management Plan (UWMP) determines future water demand projects by taking in to account expected future growth in its service area, including growth projections of the Association of Bay Area Governments (ABAG), which are incorporated into local General Plans.

Table 3.15-3: South San Francisco District Water Demand Projections

Year (acre-feet)				
2025	**2030**	**2035**	**2040**	**2045**
7,543	7,483	7,635	8,000	8,423

Source: California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. South San Francisco District. June.

In its 2020 UWMP, Cal Water indicates that water use has been decreasing in the District since the mid-2000s. Several factors have contributed to this reduction. Cal Water implemented conservation pricing starting in 2009, supplying stronger financial incentives to use water efficiently. Second, starting around 2012, Cal Water tripled the level of expenditure on conservation programs aimed at helping customers use water more efficiently. Third, appliance-efficiency standards and plumbing codes have contributed to significant improvement over time in the average water use efficiency of the installed base of appliances and plumbing fixtures. For example, a new toilet uses roughly one-third the amount of water as a toilet manufactured in the 1980s while a new clothes washer uses about half the amount of water as an older washer. Per capita water use in 2020 was 38 percent below its peak in the early 2000s. Water use in 2020 was 6,936 acre-feet. Residential customers accounted for most of the District's service connections and 53 percent of its water uses. Nonresidential water uses accounted for 33 percent of total demand, while distribution system losses accounted for 3 percent.[3]

Single Dry and Multiple Dry Hydrologic Years

Water supply and demand patterns change during normal, single dry, and multiple dry years. Table 3.15-4 and Table 3.15-5 show projected water supply and demand totals for the single dry year and multiple dry years as indicated in Cal Water's 2020 UWMP.

[3] California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. South San Francisco District. June.

Table 3.15-4: South San Francisco District Single Dry Year Supply and Demand Comparison

	Year (acre-feet)				
Supply/Demand	**2025**	**2030**	**2035**	**2040**	**2045**
Supply Totals	5,564	5,523	5,624	5,799	5,427
Demand Totals	7,831	7,767	7,925	8,304	8,743
Difference	(2,267)	(2,244)	(2,301)	(2,505)	(3,316)

Source: California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. South San Francisco District. June.

Table 3.15-5: South San Francisco District Multiple Dry Years Supply and Demand Comparison

		Year (acre-feet)				
Year	**Supply/Demand**	**2025**	**2030**	**2035**	**2040**	**2045**
First year	**Supply Totals**	5,678	5,636	5,739	5,917	5,534
	Demand Totals	8,009	7,943	8,104	8,492	8,940
	Difference	(2,331)	(2,307)	(2,365)	(2,574)	(3,407)
Second year	**Supply Totals**	5,095	5,059	5,082	5,291	5,534
	Demand Totals	8,009	7,943	8,104	8,492	8,940
	Difference	(2,914)	(2,884)	(3,022)	(3,201)	(3,407)
Third year	**Supply Totals**	5,095	5,059	5,082	5,291	5,534
	Demand Totals	8,009	7,943	8,104	8,492	8,940
	Difference	(2,914)	(2,884)	(3,022)	(3,201)	(3,407)
Fourth year	**Supply Totals**	5,095	5,059	5,082	4,874	4,941
	Demand Totals	8,009	7,943	8,104	8,492	8,940
	Difference	(2,914)	(2,884)	(3,022)	(3,618)	(4,000)
Fifth year	**Supply Totals**	5,095	5,059	4,819	4,874	4,941
	Demand Totals	8,009	7,943	8,104	8,492	8,940
	Difference	(2,914)	(2,884)	(3,285)	(3,618)	(4,000)

Source: California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. South San Francisco District. June.

As shown in the above tables, significant water supply shortfalls are currently projected in future single and multiple dry years in the Cal Water 2020 UWMP. While the groundwater supply is expected to be 100 percent reliable in all year types, the reliability of the supply from the SFPUC RWS is anticipated to vary greatly in different year types and different analysis scenarios. It is

indicated that these shortfalls occur directly because of the Bay-Delta Plan Amendment implementation which is expected to be implemented in the year 2022, assuming all required approvals are obtained. However, implementation is uncertain (further discussion is available in the Cal Water 2020 UWMP). The Bay-Delta Plan Amendment consists of amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary by the California State Water Resources Control Board (State Water Board) which establish water quality objectives to maintain the health of the Bay-Delta ecosystem. The Bay-Delta-Plan Amendment was developed with the stated goal of increasing salmonid populations in the San Joaquin River tributaries (the Stanislaus, Merced, and Tuolumne Rivers) and the Bay-Delta. It requires the release of 30 to 40 percent of the "unimpaired flow" on the three tributaries from February through June in every year type, thereby reducing available RWS available supplies.

Numerous uncertainties remain in the Bay-Delta Plan Amendment (as further discussed in the Cal Water 2020 UWMP) and the projections represented here likely represent a worst-case scenario.

Alternatively, the SFPUC provided water supply reliability projections without the Bay-Delta Plan Amendment which indicated that SFPUC would be able to supply 100 percent of the projected RWS demands in all year types through 2045, except for fourth and fifth consecutive dry years in 2045, during which 90 percent of projected RWS demands would be met. As noted in the Cal Water 2020 UWMP, the large disparity in projected water supply reliability between these two scenarios demonstrate the current level of uncertainty. Additional discussion can be found in the Cal Water 2020 UWMP. [4]

Cal Water has developed a Water Shortage Contingency Plan, pursuant to California Water Code Section 10632, to address potential water shortage conditions. The Water Shortage Contingency Plan (Appendix L of the Cal Water 2020 UWMP) serves as a stand-alone document to be engaged in the case of a water shortage event, such as a drought or supply interruption, and defines specific policies and actions that will be implemented at various shortage level scenarios. For example, implementing customer water budgets and surcharges, or restricting landscape irrigation to specific days and/or times. Consistent with California Department of Water Resources' requirements, the Water Shortage Contingency Plan includes six levels to address shortage conditions ranging from up to 10 percent to greater than 50 percent shortage. The Water Shortage Contingency Plan also identifies a suite of demand mitigation measures for Cal Water to implement at each level and identifies procedures for Cal Water to annually assess whether or not a water shortage is likely to occur in the coming year, among other things. Stage 6: Extreme Shortage is the most stringent level, which includes a moratorium on new water service connections and prohibiting all landscape irrigation. In addition, the SFPUC has initiated an Alternative Water Supply Planning Program (to ensure that the SFPUC can meet its Retail and Wholesale Customer water needs).[5]

Water Neutral Development Policy

Cal Water is currently in the process of adopting a Water Neutral Development Policy. The purpose of the Water Neutral Development Policy is to ensure that there is enough water at all times to meet

[4] California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. South San Francisco District. June.
[5] Ibid.

the basic needs of the community and increase drought resiliency, among other things. The Water Neutral Development Policy would require any new residential, commercial, or industrial development within the South San Francisco District that is expected to use 50 AFY or more in net new demand to offset its net increase in water demand. The net increase in water demand associated with any new development would be calculated as the expected total water use due to the proposed development and/or expansion, minus the amount of existing water use, on-site credits (if available), and/or alternative sources of water supply. Alternative sources could include but are not limited to: (1) reused graywater, (2) reused blackwater, (3) reused mixed gray/blackwater, (4) captured rainwater/stormwater, and (5) air conditioning condensate.

The Development Offset Program would require the payment of a new, non-refundable special facilities fee, referred to as a Development Offset Fee. The fee would only apply to developments with a net demand increase that is 50 acre-feet per year or more. For developments that do not meet this trigger, the existing facilities fees continue to apply.

The Development Offset Fee amount would be determined using a detailed projection of total annual water demand resulting from the proposed development, excluding temporary demands such as those required for landscape establishment. The applicant may choose to comply with the defined Development Offset Fee by any combination of the following activities: (1) paying to the South San Francisco District the required Development Offset Fee calculated according to the offset costs table included in the Policy, (2) conducting off-site conservation activities, or (3) conducting other pre-approved demand offset projects. Cal Water would verify compliance with the Water Neutral Development Policy (i.e., ensure that all Development Offset Fees and/or conservation offset measures are completed) prior to establishing a water service connection for future proposed development projects.

Westborough Water District

WWD is a special district governed by an elected five-member board. The WWD has approximately 4,000 residential, commercial and irrigation service connections. The WWD service area covers approximately 1 square mile that is bounded by Skyline Boulevard (west), the City of Daly City (north), Interstate 280 (I-280) (east), and the City of San Bruno (south) (Exhibit 3.15-1). The WWD service area population is approximately 12,500.[6] Within the City of South San Francisco, WWD provides water service to the Westborough neighborhood.

Water System

Water from the SFPUC RWS is delivered to the WWD's main pump station via a 14-inch pipeline in Westborough Boulevard, which is connected to the SFPUC's transmission pipeline near West Orange Avenue. WWD operates and maintains a distribution system that includes three pressure zones, five pumps, three water tanks, and four pressure regulating valves. The system includes many miles of water mains with fire hydrants at regular intervals along all the streets in the service area. The WWD can transfer water between pressure zones either in a pump up or flow down mode. WWD has three

[6] Westborough Water District (WWD). 2021. 2020 Urban Water Management Plan. Website: https://storage.googleapis.com/westboroughwater-org/uploads/Draft_WWD_UWMP_2020_20210525_with_Appendices.pdf. Accessed April 20, 2022.

storage tanks with a capacity of 5.8 million gallons (MG) and uses a portion of a fourth tank that is owned by the North Coast County Water District (NCCWD). This tank supplies 0.5 MG of additional working storage for WWD, pursuant to a joint agreement between the two districts. The current storage capacity provides an adequate reserve for fire defense and is sufficient to supply six days of emergency water supply based on the current level of demand.

WWD has interties with the adjoining water systems operated by the NCCWD and the City of Daly City. Water from the SFPUC is routinely transferred and exchanged between WWD and NCCWD in the course of operating the shared storage tank. The intertie with Daly City is not frequently used but is available to either purveyor in the event of a local emergency. The interties and exchanges with these adjoining purveyors are neither a current nor planned source of water supply for WWD. The interconnection with the NCCWD is used to manage existing supplies, while both the NCCWD and Daly City interconnections provide potential emergency backup sources of water.

Water Supply

WWD's sole source of water supply is purchased water from the SFPUC. It is derived from the same sources that serve the Cal Water South San Francisco District non-groundwater sources. WWD's Individual Supply Guarantee (ISG) is approximately 482 MG per year. Between 2016 and 2020, WWD purchased between 56 and 68 percent of its ISG, which ranged from 267 to 329 MG per year. Table 3.15-6 summarizes the WWD's UWMP's future water supply projections, which assumes that water supplies from the SFPUC RWS through 2045 are projected to be equivalent to WWD's ISG of 482 MG per year.

Table 3.15-6: WWD Supply Projections

Year (MG)				
2025	**2030**	**2035**	**2040**	**2045**
482	482	482	482	482

Notes:
MG = million gallons
Source: Westborough Water District (WWD). 2021. 2020 Urban Water Management Plan. June.

Water Demand

Between 2016 and 2020, systemwide demand ranged from 267 to 329 MG per year. Residential was the largest source of usage at 71 percent followed by commercial at 10 percent. Landscape and system losses accounted for the remaining sources of usage. Table 3.15-7 summarizes the WWD's UWMP's future water demand projections. The demand projections are lower than the supply projects shown in Table 3.15-6, signifying that WWD anticipates that adequate water supplies will be available during normal water years through 2045.

Table 3.15-7: WWD Demand Projections

Year (MG)				
2025	2030	2035	2040	2045
317	313	311	310	310

Notes:
MG = million gallons
Source: Westborough Water District (WWD). 2021. 2020 Urban Water Management Plan. June.

Single Dry and Multiple Dry Hydrologic Years

Table 3.15-8 and Table 3.15-9 show projected water supply and demand totals for the single dry year and multiple dry years as indicated in WWD's 2020 UWMP.

Table 3.15-8: WWD Single Dry Year Supply and Demand Comparison

Supply/Demand	Year (MG)				
	2025	2030	2035	2040	2045
Supply Totals	194	190	190	190	162
Demand Totals	317	313	311	310	310
Difference	(123)	(123)	(121)	(120)	(148)

Notes:
MG = million gallons
Source: Westborough Water District (WWD). 2021. 2020 Urban Water Management Plan. June.

Table 3.15-9: WWD Multiple Dry Years Supply and Demand Comparison

Year	Supply/Demand	Year (MG)				
		2025	2030	2035	2040	2045
First year	**Supply Totals**	194	190	190	190	162
	Demand Totals	317	313	311	310	310
	Difference	(123)	(123)	(121)	(120)	(148)
Second year	**Supply Totals**	166	166	162	162	162
	Demand Totals	317	313	311	310	310
	Difference	(151)	(148)	(149)	(148)	(148)
Third year	**Supply Totals**	166	166	162	162	162
	Demand Totals	317	313	311	310	310
	Difference	(151)	(148)	(149)	(148)	(148)

Year	Supply/Demand	Year (MG)				
		2025	2030	2035	2040	2045
Fourth year	**Supply Totals**	166	166	162	144	137
	Demand Totals	317	313	311	310	310
	Difference	(151)	(148)	(149)	(166)	(173)
Fifth year	**Supply Totals**	166	166	148	144	137
	Demand Totals	317	313	311	310	310
	Difference	(151)	(148)	(163)	(166)	(173)

Notes:
MG = million gallons
Source: Westborough Water District (WWD). 2021. 2020 Urban Water Management Plan. June.

As shown in the tables above, and much like that of the Cal Water 2020 UWMP analysis, significant water supply shortfalls are currently projected in future single and multiple dry years in the WWD 2020 UWMP due to the Bay-Delta Plan Amendment implementation as previously discussed.

WWD has developed a Water Shortage Contingency Plan, pursuant to California Water Code Section 10632, to address potential water shortage conditions. The Water Shortage Contingency Plan (Appendix I of the WWD 2020 UWMP) serves as a stand-alone document to be engaged in the case of a water shortage event, such as a drought or supply interruption, and defines specific policies and actions that will be implemented at various shortage level scenarios. For example, implementing customer water budgets and surcharges, or restricting landscape irrigation to specific days and/or times. Consistent with California Department of Water Resources' requirements, the Water Shortage Contingency Plan includes six levels to address shortage conditions ranging from up to 10 percent to greater than 50 percent shortage. The Water Shortage Contingency Plan also identifies a suite of demand mitigation measures for WWD to implement at each level and identifies procedures for WWD to annually assess whether or not a water shortage is likely to occur in the coming year, among other things. Stage 6 is the most stringent level, which requires a voluntary or mandatory reduction in water use greater than 50 percent because of water supply shortages or an emergency.

In addition to evaluating local options to increase supply reliability, WWD has placed high priority on working with the Bay Area Water Supply and Conservation Agency (BAWSCA) and SFPUC in the upcoming years to better refine the estimates of RWS supply reliability and indicates that the UWMP may be amended when new information becomes available. Putting the Bay-Delta Plan Amendment uncertainties aside, BAWSCA's current drought allocation cutbacks will require WWD to apply its Water Shortage Contingency Plan Stage 6 for water use restrictions up to above 50 percent (see Appendix I of the WWD 2020 UWMP) and could affect WWD's short- and long-term water management decisions. However, WWD acknowledges that significant drought reductions may be difficult to achieve given the District's low per capita water use. As indicated in Section 7.1.3.5 of its 2020 UWMP, the WWD is working independently and with the other BAWSCA agencies to identify regional mitigation measures to improve reliability for regional and local water supplies and meet customer water needs. If conditions for large drought cutbacks to the RWS persist, WWD would

need to implement additional demand management practices to invoke strict restrictions on potable water use and accelerate efforts to develop alternative supplies of water.[7] WWD recommends that users of its 2020 UWMP contact WWD staff for potential updates about its water supply reliability before using the 2020 UWMP drought cutback projections for their planning projects and referencing the drought allocations.

Wastewater

The City of South San Francisco Public Works Department provides wastewater collection and treatment to most of the city limits. WWD provides wastewater collection to the Westborough neighborhood of South San Francisco.

South San Francisco Public Works Department

Collection

According to the South San Francisco Sewer Water Management Plan, at the 2020 planning horizon year condition, the average and peak-hour dry weather flows were anticipated to be 5.5 and 12.1 million gallons per day (MGD), respectively.[8] The average and peak-hour wet weather flows were anticipated to be 6.4 MGD and 14.1 MGD, respectively.[9]

The City's Hot Spot Cleaning Work Plan (HSCWP) consists of identifying system pipeline problems and incorporating the best methodology to prevent any sanitary sewer overflows.[10] The main purpose of the City's preventive maintenance sewer cleaning and HSCWP program is maintaining adequate hydraulic capacity of the sewer system. This permits the system to operate at the intended design flow, without restrictions or debris accumulation that could result in a stoppage, sanitary sewer overflow or backup.

Treatment

Wastewater collected by the City of South San Francisco is transmitted to the South San Francisco/San Bruno Water Quality Control Plant (WQCP) located at 195 Belle Air Road. The WQCP provides secondary treatment that employs a conventional air-activated sludge process. Solids separated from the wastewater are treated with anaerobic digesters. Digested sludge is dewatered and hauled to the landfill for final disposal as an alternative daily cover. Treated effluent from the WQCP combines with secondary effluent discharges from the Cities of Burlingame and Millbrae, and the San Francisco International Airport. The combined flows are pumped into the North Bayside System Unit outfall, which discharges to the San Francisco Bay.[11] The average dry weather flow through the facility as of 2022 is approximately 7 MGD. Design capacity is 13 MGD during dry

[7] Westborough Water District (WWD). 2021. 2020 Urban Water Management Plan. June.
[8] City of South San Francisco. 2019. Sewer System Management Plan. November.
[9] Ibid.
[10] Ibid.
[11] Schumacker, Brian, MPA. Plant Superintendent, Project Manager, Chief Plant Operator, South San Francisco/San Bruno Water Quality Control Plant (WQCP). Personal communication: email. April 19, 2022.

weather flows.[12] Peak wet weather flows can exceed 60 MGD.[13] The per capita flow rate over the last 10 years has averaged 79 gallons per capita per day.[14]

Westborough Water District

Collection

WWD has 20 miles of gravity sanitary sewer mains, three-quarter mile of sewer force main and three sewer lift stations. The Avalon Sewer Lift Station has two pumps, and both the Westborough and Rowntree Lift Stations have three pumps at each station. WWD contracts with the City of Daly City (North San Mateo County Sanitation District) for general maintenance, emergency response, collection, and treatment. WWD does not physically perform any of the maintenance, repairs or treatment of the sanitary sewer system as those responsibilities are conducted by agreement through the North San Mateo County Sanitation District. WWD's sanitary sewer flow averages approximately 598,000 gallons per day during wet weather compared to 648,000 gallons per day during dry weather.[15] According to the WWD UWMP, an estimated wastewater volume of 222 MG was collected from the WWD service area in 2020.[16] Since 2010 the WWD has had only one sanitary sewer overflow that was attributed to an electrical power failure.[17]

Treatment

The North San Mateo County Sanitation District treatment plant is located in Daly City at 153 Lake Merced Boulevard. It treats wastewater from the majority of residents of Daly City, along with Broadmoor Village, a portion of the Town of Colma, the Westborough County Water District in South San Francisco, and the San Francisco County jail in San Bruno.[18] The treatment plant has a permitted/design capacity of 10.3 MGD. It has an average flow of 5.6 MGD per day. During wet weather flows, the treatment plan has handled as much as 15 MGD.[19] The plant provides secondary treatment and discharges to the Pacific Ocean through an ocean outfall pipe. A portion of the wastewater treatment plant's secondary effluent is diverted to a tertiary treatment plant that was completed in 2004. This plant provides reclaimed wastewater for irrigation use in Daly City and for in-plant use.[20]

Solid Waste

South San Francisco Scavenger Company, Inc. and Blue Line Transfer, Inc. provide franchise solid waste and recycling collection and disposal to residential and nonresidential customers in South San

[12] Talbot, Nicolas. Assistant Plant Superintendent, South San Francisco/San Bruno Water Quality Control Plant (WQCP). Personal communication: email. April 28, 2022.
[13] City of South San Francisco. 2022. Water Quality Control Plant. Website: https://www.ssf.net/departments/public-works/water-quality-control-plant. Accessed April 11, 2022.
[14] Schumacker, Brian, MPA. Plant Superintendent, Project Manager, Chief Plant Operator, South San Francisco/San Bruno Water Quality Control Plant (WQCP). Personal communication: email. April 19, 2022.
[15] Westborough Water District (WWD). 2022. Sanitary Sewer. Website: https://www.westboroughwater.org/sewer. Accessed April 11, 2022.
[16] Westborough Water District (WWD). 2021. 2020 Urban Water Management Plan. June.
[17] Westborough Water District (WWD). 2022. Sanitary Sewer. Website: https://www.westboroughwater.org/sewer. Accessed April 11, 2022.
[18] City of Daly City. 2022. Water and Wastewater Resources. Website: https://www.dalycity.org/576/History. Accessed April 11, 2022.
[19] Krauss, Greg. Chief of Operations, Water and Wastewater, City of Daly City. 2022. Personal communication: telephone. April 11, 2022.
[20] Westborough Water District (WWD). 2021. 2020 Urban Water Management Plan. June.

Francisco. The company has a fleet of 68 vehicles and collects more than 250,000 tons of solid waste annually.[21]

Solid waste and recyclable materials are hauled to the Blue Line Materials Recovery Facility and Transfer Station located at 500 East Jamie Court, South San Francisco for processing. The 10-acre facility has a maximum permitted throughout of 1,200 tons per day and a maximum permitted capacity of 2,400 tons per day.[22] After processing to remove usable materials, remaining solid waste is hauled to the landfill.

Table 3.15-10 summarizes the regional landfills where solid waste is landfilled. The landfills have a combined remaining capacity of 43.4 million cubic yards.

Table 3.15-10: Regional Landfill Summary

Name	Location	Permitted Capacity	Maximum Permitted Daily Throughput	Remaining Capacity
Corinda Los Trancos Landfill (Ox Mountain)	Half Moon Bay	60.5 million cubic yards	3,598 tons	22.2 million cubic yards
Newby Island Sanitary Landfill	San Jose	57.5 million cubic yards	4,000 tons	21.2 million cubic yards
Source: California Department of Resources Recycling and Recovery (CalRecycle) 2021.				

Storm Drainage

The City of South San Francisco Public Works Department maintains storm drainage infrastructure within the city limits. The storm drainage system consists of inlets, underground piping, and basins. Stormwater runoff in the City is collected in storm drains and discharged into Colma Creek and the San Francisco Bay. Some stormwater runoff infiltrates into the ground; however, because of the large amount of impervious surfaces in the City, much of the stormwater flows over land and into existing storm drains. Increasing sea levels is a noted concern to the City's storm drainage system.[23]

Telecommunications, Electricity, and Natural Gas Facilities

The electrical power distribution network within the City of South San Francisco is owned and operated by PG&E. The electrical power grid consists of both overhead and underground electrical lines.

Provision of electricity is through PG&E with the option of purchasing electricity through Peninsula Clean Energy, which is delivered by PG&E.[24] Peninsula Clean Energy is a community-controlled, not-

[21] South San Francisco Scavenger Company. 2022. About Us. Website: https://ssfscavenger.com/about-us/. Accessed April 14, 2022.
[22] California Department of Resources Recycling and Recovery (CalRecycle). 2019. Solid Waste Information System Facility/Site Summary. Blue Line MRF and TS (41-AA-0185). Website: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1598?siteID=3259. Accessed April 14, 2022.
[23] City of South San Francisco. 2016. Storm Drain Master Plan. February.
[24] City of South San Francisco. 2022. Community Choice Energy. Website: https://www.ssf.net/departments/city-manager/sustainability/community-choice-energy. Accessed May 2, 2022.

for-profit electricity provider that has been serving the City since 2016. Peninsula Clean Energy's service area includes all of San Mateo County and the City of Los Banos. Peninsula Clean Energy customers have the option of receiving 50 percent or 100 percent renewable energy from sources like solar or wind power.[25] All businesses and residents are automatically enrolled in Peninsula Clean Energy program but can opt out of the program to purchase electricity from PG&E at any time.

The natural gas distribution system within the City is also owned and operated by PG&E, whose service area stretches 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 provides 42,141 miles of natural gas distribution pipelines and 6,438 miles of transmission pipelines.

South San Francisco residents and businesses have a growing range of telecommunications services and options to choose from today. As in communities throughout California, the shift from traditional home phone service (landlines) to wireless telephone connections and other options has been pronounced in South San Francisco in recent years.[26] Landline service is provided by a variety of local providers, including Ooma, Community Phone Landline, and Xfinity Landline. Another option is DSL service, which runs via copper lines and makes use of a modem in the home to allow customers to connect to both the internet and a telephone line at the same time. Additionally, there are numerous internet providers in South San Francisco, including Xfinity, Century Link, Cox, and Earthlink.

3.15.3 - Regulatory Framework

Federal

Clean Water Act (National Pollutant Discharge Elimination System)

The Water Pollution Control Act of 1972, more commonly known as the Clean Water Act (CWA), regulates the discharge of pollutants into watersheds throughout the nation. Under the CWA, the United States Environmental Protection Agency (EPA) implements pollution control programs and sets wastewater standards.

The National Pollutant Discharge Elimination System (NPDES) permit program was established within the CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities. Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage treatment plant. In 2003, smaller (less than 100,000 population) municipalities and unincorporated counties were

[25] Peninsula Clean Energy. 2022. Energy Choice. Website: https://www.peninsulacleanenergy.com/energy-choices/. Accessed May 2, 2022.

[26] Wirefly. 2022. Home Phone Service Providers in South San Francisco. Website: https://www.wirefly.com/compare-home-phone-service/california/south-san-francisco. Accessed May 2, 2022.

required to obtain coverage under a Statewide NPDES Municipal General Stormwater Permit (Phase II Permit) issued by the State Water Board. In San Mateo County, the County and all municipalities, including South San Francisco, are subject to the conditions of the regulations described in the current 2013 Phase II Permit.

Safe Drinking Water Act

The Safe Drinking Water Act authorizes the EPA to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and man-made contaminants. These standards set enforceable maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the State Department of Health Services conducts most enforcement activities. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

Title 40 of the Code of Federal Regulations

Title 40 of the Code of Federal Regulations, Part 258 (Resource Conservation and Recovery Act [RCRA], Subtitle D), contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria.

State

California Water Code

The California Water Code, a section of the California Code of Regulations, is the governing law for all aspects of water management in California.

California Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act) is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State must adopt water quality policies, plans, and objectives that protect the State's waters for the use and enjoyment of the people. Regional authority for planning, permitting, and enforcement is delegated to the nine Regional Water Quality Control Boards (RWQCBs). The Porter-Cologne Act sets forth the obligations of the State Water Board and the nine RWQCBs, which engage in a number of water quality functions in their respective regions and regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. The San Francisco Bay RWQCB is responsible for the project site.

California Urban Water Management Planning Act

The Urban Water Management Planning Act (California Water Code §§ 10610–10656) requires that all urban water suppliers with at least 3,000 customers prepare UWMPs and update them every 5 years. The act requires that UWMPs include a description of water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions. Specifically, UWMPs must:

- Provide current and projected population, climate, and other demographic factors affecting the supplier's water management planning;

- Identify and quantify, to the extent practical, the existing and planned sources of water available to the supplier;
- Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage;
- Describe plans to supplement or replace that source with alternative sources or water demand management measures;
- Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis (associated with systems that use surface water);
- Quantify past and current water use;
- Provide a description of the supplier's water demand management measures, including schedule of implementation, program to measure effectiveness of measures, and anticipated water demand reductions associated with the measures; and
- Assess the water supply reliability.

California Health and Safety Code

Section 64562 of the California Health and Safety Code establishes water supply requirements for service connections to public water systems. Before additional service connections can be permitted, enough water must be available to the public water system from its water sources and distribution reservoirs to adequately, dependably, and safely meet the total requirements of all water users under maximum-demand conditions.

Senate Bills 610 and 221, Water Supply Assessment and Verification

Senate Bill (SB) 610 and SB 221 amended State law to ensure better coordination between local water supply and land use decisions and confirm that there is an adequate water supply for new development. Both statutes require that detailed information regarding water availability be provided to city or county decision-makers prior to approval of large development projects. SB 610 requires the preparation of a Water Supply Assessment (WSA) for certain types of projects, as defined by Water Code Section 10912, which are subject to California Environmental Quality Act (CEQA) Guidelines. Projects required to prepare a WSA are defined as follows:

- Residential development of more than 500 dwelling units.
- Shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor area.
- Hotel or motel, or both, having more than 500 rooms.
- Industrial, manufacturing or processing plant, or industrial park planned to employ more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- Mixed-use projects that include one or more of the projects specified above.
- Project that would demand an amount of water equivalent to, or greater than, the amount of water required for 500 dwelling units.

SB 221 establishes consultation and analysis requirements related to water supply planning for residential subdivisions including more than 500 dwelling units. The water supplier must provide written verification that sufficient water is available for a project before construction begins. The document used to determine compliance with both SB 610 and SB 221 is the adopted UWMP.

Assembly Bill 715

Assembly Bill (AB) 715, enacted in 2007, requires that any toilet or urinal sold or installed in California on or after January 1, 2014, cannot have a flush rating exceeding 1.28 and 0.5 gallons per flush, respectively. AB 715 superseded the State's previous standards for toilet and urinal water use set in 1991 of 1.6 and 1.0 gallons per flush, respectively. On April 8, 2015, in response to the Governor's Emergency Drought Response Executive Order (EO B-29-15), the California Energy Commission approved new standards for urinals requiring that they not consume more than 0.125 gallons per flush, 75 percent less than the standard set by AB 715.

Water Conservation Act of 2009

The Water Conservation Act of 2009 (SB X7-7) requires all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita water by 20 percent by 2020 in each water district. Effective in 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for State water grants or loans.

California Model Water Efficient Landscape Ordinance

The Model Water Efficient Landscape Ordinance was adopted by the Office of Administrative Law in September 2009 and requires local agencies to implement water efficiency measures as part of their review of landscaping plans. Local agencies can either adopt the Model Water Efficient Landscape Ordinance or incorporate provisions of the Ordinance into code requirements for landscaping. Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15) directed the California Department of Water Resources to update the State's Model Water Efficient Landscape Ordinance (Ordinance) through expedited regulation. The California Water Commission approved the revised Ordinance on July 15, 2015.

New development projects that include landscape areas of 500 square feet or more are subject to the Ordinance. This applies to residential, commercial, industrial, and institutional projects that require a permit, plan check, or design review. The previous landscape size threshold for new development projects ranged from 2,500 square feet to 5,000 square feet. The size threshold for existing landscapes that are being rehabilitated has not changed, remaining at 2,500 square feet. Only rehabilitated landscapes that are associated with a building or landscape permit, plan check, or design review are subject to the Ordinance.

The City of South San Francisco Municipal Code Section 20.300.007 states that development shall comply with the State of California Model Water Efficient Landscape Ordinance.

California Code of Regulations Title 24

Part 6 (Energy Efficiency Standards for Residential and Nonresidential Buildings)

California Code of Regulations Title 24 Part 6 (California's Energy Efficiency Standards for Residential and Nonresidential Buildings) was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas (GHG) emissions. The 2019 Building Energy Efficiency Standards went into effect on January 1, 2020.[27] The 2022 Building Energy Efficiency Standards are scheduled to go into effect on January 1, 2023.[28]

Part 11 (California Green Building Standards Code)

California Code of Regulations Title 24, Part 11, is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went into effect January 1, 2011. The code is updated on a regular basis, with the most recent update consisting of the 2019 California Green Building Standards Code (CALGreen) that became effective January 1, 2020.[29] Local jurisdictions are permitted to adopt more stringent requirements, as State law provides methods for local enhancements. The code recognizes that many jurisdictions have existing construction and demolition ordinances and defers to them as the ruling guidance if they provide a minimum 50 percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. The California Building Standards Code (CBC) provides the minimum standard that buildings must meet to be certified for occupancy, which is enforced by the local building or planning department with jurisdiction over the building.

Senate Bill 407

SB 407, enacted in 2009, mandates that all existing buildings in California come up to current State plumbing fixture standards within this decade. This law establishes requirements that residential and commercial property built and available for use on or before January 1, 1994, replace plumbing fixtures that are not water conserving, defined as "noncompliant plumbing fixtures." This law also requires effective January 1, 2017, that a seller or transferor of single-family residential property show to the purchaser or transferee, in writing, the specified requirements for replacing plumbing fixtures and whether the real property includes noncompliant plumbing. Similar disclosure requirements went into effect for multi-family and commercial transactions January 1, 2019. SB 837, passed in 2011, reinforces the disclosure requirement by amending the statutorily required transfer disclosure statement to include disclosure about whether the property follows SB 407 requirements.

Title 22 of California Code of Regulations

Title 22 regulates the use of reclaimed wastewater. In most cases, only disinfected tertiary water may be used on food crops where recycled water would encounter the edible portion of a crop.

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[27] California Energy Commission (CEC). 2019 Building Energy Efficiency Standards. Website: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency. Accessed April 25, 2022.

[28] California Energy Commission (CEC). 2022 Building Energy Efficiency Standards. Website: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency. Accessed May 5, 2022.

[29] International Code Council, Inc. 2019 California Green Building Standards Code. Website: https://codes.iccsafe.org/content/CGBC2019P4. Accessed May 5, 2022.

Disinfected secondary treatment may be used for food crops where the edible portion is produced below ground and will not encounter secondary effluent. Lesser levels of treatment are required for other types of crops, such as orchards, vineyards, and fiber crops.

General Waste Discharge Requirement

On May 2, 2006, the State Water Board adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than one mile of sewer pipe. The order provides a consistent Statewide approach to reducing sanitary sewer overflows by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sewer System Management Plan (SSMP). The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the State Water Board using an online reporting system. The State Water Board delegated authority to its nine RWQCBs to enforce these requirements.

Assembly Bill 341

The purpose of AB 341 is to reduce GHG emissions by diverting commercial solid waste to recycling efforts and to expand the opportunity for additional recycling services and recycling manufacturing facilities in California. In addition to Mandatory Commercial Recycling, AB 341 sets a Statewide goal for 75 percent disposal reduction by the year 2020.

Assembly Bill 939

AB 939 (Public Resources Code [PRC] § 41780) requires cities and counties to prepare Integrated Waste Management Plans (IWMPs) and to divert 50 percent of solid waste from landfills beginning in calendar year 2000 and each year thereafter. AB 939 also requires cities and counties to prepare Source Reduction and Recycling Elements as part of the IWMP. These elements are designed to develop recycling services to achieve diversion goals, stimulate local recycling in manufacturing, and stimulate the purchase of recycled products.

Senate Bill 1016

SB 1016 builds on AB 939 compliance requirements by requiring that the 50 percent solid waste diversion be measured in terms of per capita disposal expressed as pounds per person per day. The new per capita disposal and goal measurement system moves the emphasis from an estimated diversion measurement number to using an actual disposal measurement number as a factor. Every year CalRecycle calculates each jurisdiction's per capita (per resident and per employee) disposal rates and reviews jurisdiction compliance on a case-by-case basis. Jurisdictions are not compared to other jurisdictions or the Statewide average but compared to their own 50 percent per capita disposal target.

Senate Bill 1383

As described in Section 3.7, Greenhouse Gas Emissions, SB 1383 was signed in September 2016 to reduce emissions of short-lived climate pollutants. As it pertains to CalRecycle, SB 1383 establishes 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. The law grants CalRecycle the regulatory

authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025.[30] SB 1383 further supports California's efforts to achieve the Statewide 75 percent recycling goal by 2020 established in AB 341.

Regional

Cal Water Neutral Development Policy

In July 2021, Cal Water began development of a Water Neutral Development Policy (or Policy) for its three Peninsula Districts, which share the same SFPUC supply allocation. The purpose of the Policy is to ensure that there is enough water at all times to meet the basic needs of the community and increase drought resiliency, among other things. The Policy would require any new residential, commercial, or industrial development within the South San Francisco District that is expected to use 50 AFY or more in net new demand to offset its net increase in water demand. The net increase in water demand associated with any new development would be calculated as the expected total water use due to the proposed development and/or expansion, minus the amount of existing water use, on-site credits (if available), and/or alternative sources of water supply. Alternative sources could include but are not limited to: (1) reused graywater, (2) reused blackwater, (3) reused mixed gray/blackwater, (4) captured rainwater/stormwater, and (5) air conditioning condensate.

The Development Offset Fee would be determined using a detailed projection of total annual water demand resulting from the proposed development, excluding temporary demands such as those required for landscape establishment. The applicant may choose to comply with the defined Development Offset Fee by any combination of the following activities: (1) paying to the South San Francisco District the required Development Offset Fee calculated according to the offset costs table included in the Policy, (2) conducting off-site conservation activities, or (3) conducting other pre-approved demand offset projects. Cal Water would verify compliance with this Policy (i.e., ensure that all payments for offsets and/or conservation offset measures are completed) prior to establishing a water service connection for future proposed development projects.

San Mateo Countywide Stormwater Pollution Prevention Program

The San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) was established in 1990 to reduce the pollution carried by stormwater into local creeks, the San Francisco Bay, and the Pacific Ocean. The program is a partnership of the City/County Association of Governments (C/CAG), each incorporated City and town in the County, and the County of San Mateo, which share a common NPDES permit. The CWA and the California Porter-Cologne Water Quality Control Act require that large urban areas discharging stormwater into the San Francisco Bay, or the Pacific Ocean have an NPDES permit to prevent harmful pollutants from being dumped or washed by stormwater runoff, into the stormwater system, then discharged into local waterbodies. San Mateo, Santa Clara, Alameda, Marin, Sonoma, Solano, San Francisco, Fairfield/Suisun, Vallejo, and Contra Costa counties have each obtained these permits. The Municipal Regional Permit (MRP) outlines the State's requirements for municipal agencies in San Mateo County to address the water quality and

[30] California Department of Resources Recycling and Recovery (CalRecycle). 2022. Short-Lived Climate Pollutants: Organic Waste Methane Emissions Reductions. Website: https://www.calrecycle.ca.gov/Climate/SLCP/. Accessed May 2, 2022.

flow-related impacts of stormwater runoff. Some of these requirements are implemented directly by municipalities while others are addressed by the SMCWPPP on behalf of all the municipalities.[31]

Local

City of South San Francisco General Plan Update

The General Plan Update proposes the following policies and actions that assist in reducing or avoiding impacts related to utilities and service systems:

Land Use and Community Design Element

Policy LU-8.10 Ensure adequate infrastructure and utilities. Ensure adequate infrastructure and utility services (electricity, water, internet) for all future development and when feasible, underground utilities (new and existing) to enhance the public realm.

Environmental and Cultural Stewardship Element

Policy ES-5.3 Use a waterwise planting palette during new construction. During new construction and landscape renovations, prioritize xeriscaping, low-water-use plants, and native plants, minimizing the total area of high-water-use plants (e.g., turf and water features).

Policy ES-5.8 Design irrigation systems for water conservation. Install weather- or soil moisture-based irrigation controllers in all new development. Cluster plants together with similar water requirements to conserve water. Use the Water Use Classification of Landscape Species (WUCOLS) ratings to establish watering needs.

Policy ES-5.9 Encourage alternative irrigation water sources. Encourage on-site rainwater harvesting and graywater systems for irrigation. Periodically study feasibility for delivering non-potable, recycled water from the South San Francisco–San Bruno Water Quality Control Plant, Orange Memorial Park Stormwater Capture Project, or similar.

Policy ES-7.1 Develop and implement comprehensive watershed management strategy. Partner with regional and local agencies to develop a comprehensive watershed management strategy that identifies programs, partnerships, actions, and incentives that the City and partners can take to protect the City's water resources and aquatic areas. Collaborate with regional agencies and neighboring jurisdictions to manage stormwater, reduce impervious surfaces, and improve water quality in the Colma Creek watershed.

Policy ES-7.2 Integrate green infrastructure in City projects. Integrate green infrastructure strategies into City-owned landscapes to improve water quality and reduce the need to irrigate landscapes.

[31] San Mateo Countywide Water Pollution Prevention Program (SMCWPPP). 2022. About the Flows to Bay Program. Website: https://www.flowstobay.org/about/who-we-are/about-the-flows-to-bay-program/. Accessed April 13, 2022.

Policy ES-7.3 Require stormwater management practices for new and redevelopment projects. Continue to require new development and redevelopment projects to meet federal, State, regional, and local stormwater requirements, including site design, stormwater treatment, stormwater infiltration, peak flow reduction, and trash capture.

Policy ES-7.4 Encourage pervious surfaces. Encourage pervious surfaces in new developments.

Policy ES-8.1 Optimize groundwater recharge in new development. Continue to optimize groundwater recharge from new and redevelopment projects by infiltrating stormwater in accordance with State, regional, and local requirements.

Policy ES-8.2 Implement potable water demand reduction measures. Continue to update and implement the South San Francisco Urban Water Management Plan demand reduction measures to reduce groundwater pumping in the Westside Basin and to increase resilience to climate change.

Equitable Community Services Element

Policy ECS-4.4 Integrate sustainable landscape strategies**.** Integrate sustainability strategies into City-owned landscapes to improve water quality, reduce the need to irrigate landscapes, and lower water costs.

Climate Protection Element

Policy CP-3.1 Building code maintenance for new and major renovations (energy efficiency). Regularly update South San Francisco's building codes to improve the energy performance of new construction and major remodels and to phase in requirements in predicable ways.

Policy CP-3.2 Building code maintenance for new and major renovations (water efficiency). Regularly update the City's building codes to improve the water efficiency of new construction and major renovation.

Policy CP-4.1 Establish efficiency upgrade programs. Establish an energy and water efficiency upgrade program for existing buildings, focusing resources on the most disadvantaged communities.

Policy CP-4.3 Establish Greywater permitting. Establish a streamlined process for laundry-to-landscape greywater systems.

Policy CP-4.4 Community education about energy and water incentives. Educate residents and businesses on available incentive opportunities to reduce energy and water use.

Policy CP-5.1 Require minimum of LEED™ silver rating or equivalent for new buildings. Require all new municipal buildings and facilities to meet a minimum LEED™ silver rating as certified by the US Green Building Council or equivalent green building rating system. Require feasibility studies for zero-net-energy use, on-site renewable energy generation, and on-site batteries.

Policy CP-5.4 Require 75 percent waste diversion for municipal construction and demolition projects. Require municipal construction projects to achieve 75 percent waste diversion from the landfill.

Policy CP-6.1 Maintain and update Waste Reduction Plan. Maintain and regularly update the City's waste reduction plans and programs to ensure consistency with California's waste reduction goals.

Policy CP-6.2 Educational outreach about waste diversion. Develop education and technical assistance programs to help all residents and businesses to compost and recycle.

Policy CP-8.1 Evaluate system efficiency. Continuously evaluate and, as appropriate, replace systems at the wastewater treatment plant to reduce energy use.

Policy CP-8.2 Explore renewable biogas production. Explore additional capacity to generate, capture, and reuse biogas generated by the plant as power.

Policy CP-8.3 Explore recycled water supply. Explore options for delivering non-potable, recycled water for cooling towers, processes, and irrigation in East of 101 (e.g., flow pipe water).

Community Resilience Element

Action CR-1.2.2 Coordinate utility redundancy. Continue to work with regional water and energy agencies to ensure redundant water and energy supplies in case of an emergency.

Action CR-6.2.2 Work with utilities to prevent shutoff during extreme events. Work with PG&E and Peninsula Clean Energy to prevent utility shutoff during extreme heat events.

City of South San Francisco Climate Action Plan

The Climate Action Plan (CAP) includes the following actions that assist in reducing or avoiding impacts related to utilities and service systems:

Action BE 1.2 Require major renovations to meet CALGreen standards. Update zoning and building codes to require alternations or additions at least 50 percent the size of the original building to comply with minimum CALGreen requirements.

Action SW 1.1 Zero-Waste Plan. Adopt an SB 1383 compliant zero-waste plan for municipal operations and the community that includes: mandatory residential and commercial recycling and collection of organics/food waste, mandatory commercial edible food recovery program (per MOU with San Mateo County Office of Sustainability), and updated trash enclosure space and access requirements based on hauler recommendations to accommodate all waste streams (e.g., recycling, trash, and organics).

Action SW 1.2 Scavenger Partnership. Continue to work with SSF Scavenger to ensure implementation of waste reduction targets.

Action SW 1.3 Waste Reduction Compliance Pathways. Establish compliance pathways and enforcement mechanisms for mandatory organics and food waste diversion.

Action SW 1.4 Educational outreach about waste diversion. Develop education and technical assistance programs to help all residents and businesses to compost and recycle.

Action WW 1.1 Landscaping Water Requirements. Achieve greater water use reductions than WELO by requiring all landscapes obtain a landscape permit, decreasing the size threshold to capture all landscape renovations, adding prescriptive irrigation plant lists, or water budget requirements.

Action WW 1.2 Alternative Water Sources. Explore options at the South San Francisco-San Bruno Water Quality Control Plant for delivering non-potable, recycled water for cooling towers, processes, and irrigation in East of 101 (e.g., flow pipe water). Maximize available non-potable water reuse from Orange Park Stormwater Capture project, at Orange Memorial Park, Centennial Way, and new Civic Campus.

Action WW 1.3 Promote Greywater Systems. Create a streamlined permit process for laundry-to-landscape greywater systems.

Action WW 1.4 Landscaping Plant List. Develop a plant list, landscaping palette for efficiency and habitat/wildlife for new development and landscape retrofits.

Action WW 1.5 Partner with CalWater to install smart water meters throughout the City.

Action WW 2.1 Indoor Water Efficiency Standards. Require high-efficiency fixtures in all new construction and major renovations, comparable to CALGreen Tier 1 or 2 standards.

Action WW 2.2 Promote available Rebate. Promote available water conservation rebates from BayREN, Cal Water, and other sources focusing resources in the most disadvantaged communities

Action CL 1.1 Minimum LEED™ certification or equivalent for new buildings. Require all new municipal buildings and facilities to meet a minimum LEED™ silver standards as outlined by the US Green Building Council or equivalent green building rating system. Require feasibility studies for zero-net-energy use, on-site renewable energy generation, and on-site batteries.

Action CL 1.2 Environmental performance of municipal buildings and facilities. Regularly benchmark the environmental performance of municipal buildings, landscaping, parks and facilities, including energy and water use.

Action CL 1.4 Require municipal construction projects to achieve 75 percent waste diversion from the landfill.

City of South San Francisco Municipal Code

Chapter 8.16 Solid Waste–Scavenger Services

Chapter 8.16 of the Municipal Code prevents accumulation of quantities of solid waste within the boundaries of the City. It includes regulations regarding compulsory participation in solid waste collection services at residential, commercial, industrial and institutional property within the City.

Chapter 13.16 Underground Utility Installations

Chapter 13.16 of the Municipal Code contains regulations for the installation, maintenance, use, and removal of underground utilities as well as responsibilities of property owners and utility companies.

Chapter 14.04 Stormwater Management and Discharge Control

Chapter 14.04 of the Municipal Code contains regulations to ensure the future health, safety and general welfare of the City in regard to stormwater and discharge into the stormwater system.

Chapter 14.08 Water Quality Control

Chapter 14.08 of the Municipal Code contains several measures to help the City comply with all applicable California Water Code laws and federal laws required by the CWA. This Chapter provides for the regulation of direct and indirect dischargers to the publicly owned treatment works through the issuance of permits to certain nondomestic users and through enforcement of general requirements for all users.

Chapter 14.14 Sewer Lateral Construction, Maintenance, and Inspection

Chapter 14.14 of the Municipal Code contains regulations regarding the operation and maintenance of the City's sewer system, elimination of minimization of sewer overflows, compliance with applicable legal requirements pertaining to the City's sewer system and performance standards for private sewer laterals that connect or are connected to a public sewer main.

Chapter 15.22 California Green Building Standards Code

Section 15.22.010 (California Green Building Standards Code) adopts the California Green Building Standards Code, 2019 Edition, published by the California Building Standards Commission by reference.

Chapter 15.60 Recycling and Diversion of Debris from Construction and Demolition

Chapter 15.60 of the Municipal Code promotes the redirection of recyclable materials generated during construction away from landfills. All project applicants are required to complete and submit a recycling management plan to estimate the volume of debris to be generated during construction and the estimated amount of debris that would be sent to the landfill.

Section 15.62 (Deconstruction and Salvage and Recovery) encourages contractors to make every structure planned for demolition available for deconstruction, salvage, and recovery prior to demolition; and to recover the maximum feasible amount of salvageable designated recyclable and reusable materials prior to demolition, but at least at the rate set forth in CALGreen Chapter 4, Section 4.408, as may be amended from time to time.

Chapter 19.16 General Design and Improvement Standards

Section 19.16.030 (Utility Easements) states that easements not less than 10 feet wide shall be required within or across lots where necessary for underground utilities, cables, wires, street trees, drainage, conduit and water mains or other utilities.

Section 19.16.050 (Watercourses and Drainage) requires that watercourses be shown as easements when required by the City Engineer, and storm drains shall be placed in easements when public right-of-way is not available or adequate. All lots shall be so graded as to drain to an improved street or, when this is not feasible, all watercourses shall be placed entirely in underground conduits in accordance with the standards adopted pursuant to Title 19. In the event that storm drains are located at the rear lot line, there shall be provided a concrete inlet structure with iron grate at the lower corner of each lot. Where sumps are approved to handle drainage as an interim solution, defeasible easements shall be provided for necessary channels and sump areas.

City of South San Francisco Zoning Ordinance

The following chapters of the South San Francisco Zoning Ordinance, including the new or revised chapter of the Zoning Ordinance that are part of the proposed project, assist in reducing or avoiding impacts related to utilities and service systems.

Chapter 20.180 Flood Plain/Sea Level Rise Overlay (new)

Section 20.180.005 (Development Standards) (new) requires that new or replacement water supply systems and/or sanitary sewer systems must be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters. On-site waste disposal systems must be located to avoid impairment of water supply systems and/or sanitary sewer systems or contamination from them during flooding.

Chapter 20.300 Lot and Development Standards (revised)

Section 20.300.014 (Underground Utilities) (revised) requires that all exterior utilities, including but not limited to drainage systems, sewers, natural gas lines, water, electrical, telephone, cable television, and similar distribution lines providing direct service to a development site shall be installed and maintained underground within a project site. Further, all on-site underground utilities shall be designed and installed to minimize the disruption of off-site utilities, paving and landscaping during construction and maintenance.

Chapter 20.350 Standards and Requirements for Specific Uses and Activities (revised)

Section 20.350.003 (Accessory Dwelling Units) (revised) includes subsection L (Utilities and Impact Fees) which states that no accessory dwelling unit shall be permitted if it is determined that there is not adequate water or sewer service to the property.

City of South San Francisco Sewer Capacity Charge

The Sewer Capacity Charge established in Resolution 56-201745 is a “capacity charge,” as defined in Government Code, Section 66013(b)(3), the purpose of which is to finance the replacement and renewal of existing sanitary sewer facilities and the upgrade and construction of new sanitary sewer facilities to reduce impacts caused by future development and redevelopment in the City. The Sewer

Capacity Charge does not exceed the estimated reasonable cost of providing the service for which the charge is imposed because the charge imposes a proportional share of City's total sewer system investment, including specified future capital improvement projects, on new development requesting a connection to the sewer system, and redevelopment resulting in an increase in the use of the sewer system.

3.15.4 - Methodology

The following evaluation discusses whether the proposed project (collectively, the General Plan Update, Zoning Code Amendments, and Climate Action Plan) would result in direct impacts on utilities and service systems such as existing wastewater and stormwater drainage facilities, water supply, or water treatment facilities. The evaluation also discusses whether the proposed project would result in indirect impacts on utilities and services systems, such as construction impacts from new stormwater drainage systems. The analysis involved reviewing published data and material provided by the City of South San Francisco, Cal Water, WWD, and CalRecycle, including, but not limited to the Cal Water 2020 UWMP, the WWD 2020 UWMP, and the South San Francisco SSMP.

3.15.5 - Thresholds of Significance

According to CEQA Guidelines Appendix G Environmental Checklist, to determine whether impacts to utilities and service systems are significant environmental effects, the following questions are analyzed and evaluated.

Would the project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

d) 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?

e) Comply with federal, State, and local statutes and regulations related to solid waste?

3.15.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Utility Infrastructure

Impact UTIL-1: The proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which would cause significant environmental effects.

Development under the proposed project would result in additional residential and nonresidential throughout the Planning Area. As described in Chapter 2, Project Description, the proposed project is expected to accommodate 40,068 new residents, 14,312 new housing units, 42,297 new jobs, and 14,100,523 new square feet of nonresidential building space at buildout. These increases would require additional water, wastewater treatment, storm drainage, electric power, natural gas, and telecommunication services which may require the construction or relocation of facilities which could cause significant environmental impacts. Each service is discussed separately below.

Water

As noted in Impact UTIL-2, the General Plan Update includes policies and actions that would reduce water demand of future buildout. The CAP also includes actions that would reduce water demand of future buildout under the proposed project. Also described under Impact UTIL-2, both the Cal Water South San Francisco District and WWD project sufficient water supply availability under normal water years and require conservation measures under dry year conditions per the Cal Water Shortage Contingency Plan and WWD Water Shortage Contingency Plan. Both Water Storage Contingency Plans identify a suite of water demand mitigation measures to implement for each of the six water shortage levels and identifies procedures for each water agency to annually assess whether or not a water shortage is likely to occur in the coming year. Both water providers have accounted for the City's growth projections in their respective 2020 UWMPs in accordance with ABAG projections. However, it should be noted that ABAG's growth projections are inconsistent with the General Plan Update projections, as discussed in Section 3.12, Population and Housing. Nonetheless, as indicated in Impact UTIL-2, sufficient water supplies are available. In addition, most new development accommodated under the proposed project is expected to be infill and would rely on the existing distribution network that has sufficient capacity to convey available water supplies. As such, implementation of the proposed project would not result in the need to construct or expand water supply and treatment facilities that have not already been described and accounted for the in the 2020 UWMPs.

Furthermore, each individual project would be required to demonstrate the availability of water to service the development, as required and applicable, in the form of will-serve letters or, for larger projects, preparation of a WSA per SB 610. If additional facilities were to be constructed, separate environmental analysis would be required. The City currently complies with the statutory requirements listed in the regulatory section, and the General Plan Update ensures that the City will continue to comply with the State and federal regulatory requirements. The General Plan Update encourages water conservation through Policies ES-5.3, ES-5.8, and ES-5.9. Policy ES-7.1 provides for ongoing partnerships with regional and local agencies to develop a comprehensive watershed management strategy that identifies programs, partnerships, actions, and incentives that the City and partners can take to protect the City's water resources and Policy 7.2 calls for integration of

green irrigation infrastructure into City-owned landscapes. Additional policies focus on integrating green infrastructure for energy efficiency, as described in Section 3.15.3, Regulatory Framework. Overall, the General Plan Update policies contain various methods of water conservation and water planning, which would improve water management in the City.

Cal Water's 2020 UWMP and WWD's 2020 UWMP state that there are currently no planned future water supply projects or programs that are expected to provide a quantifiable increase to the water supply. However, Cal Water is currently in the process of developing a regional water supply reliability study using integrated resource planning practices to create a long-term supply reliability strategy through 2050 for Cal Water districts in the Bay Area. It is anticipated that the forthcoming study will identify feasible water supply projects that may benefit the South San Francisco District. The SFPUC has been implementing its Water System Improvement Plan (WSIP) since it was adopted in 2008. The WSIP includes several water supply projects to address the Level of Service (LOS) Goals and Objectives established in the WSIP and updated in February 2020. The SFPUC's Alternative Water Supply Planning Program is also being implemented to explore other projects that would increase overall water supply resiliency. These programs and future water supply projects are described in Section 7.1.1 of Cal Water's UWMP.

Individual infrastructure improvements that may occur under the applicable UWMPs would be subject to individual CEQA review and clearance to determine whether any would have significant environmental impacts. Therefore, the proposed project would not result in insufficient water supplies from Cal Water and WWD, and no new or expanded water treatment facilities would be needed under the proposed project. Thus, impacts would be less than significant.

Wastewater

As described under Impact UTIL-3, the General Plan Update includes policies and actions that would reduce the need for wastewater treatment. The CAP also includes actions that would reduce the need for wastewater treatment. In accordance with City requirements, new development that occurs pursuant to the proposed project would be subject to the latest adopted edition of the California Plumbing Code and CALGreen Code, including the provisions for water-efficient fixtures and toilets, which would reduce the amount of effluent entering the wastewater system. Further, as discussed under Impact UTIL-3, there is sufficient capacity at the South San Francisco/San Bruno WQCP and Daly City's North San Mateo WQCP to accommodate wastewater collection and treatment generated by proposed project.

Future development under the proposed project would be located within the urban framework of the City and near existing wastewater infrastructure. As such, implementation and buildout of the proposed project would not result in the need to construct or expand wastewater collection and treatment facilities that have not already been described and accounted for in the applicable Sewer System Master Plans. The City currently complies with the statutory requirements listed in the regulatory section, and the General Plan Update policies and actions ensure that the City will continue to comply with State and federal regulatory requirements related to wastewater. Therefore, the proposed project would not result in insufficient wastewater collection and treatment and no new or expanded wastewater treatment facilities would be needed. Thus, impacts would be less than significant.

Storm Drainage Capacity

In accordance with City requirements, new development that occurs pursuant to the proposed project would be required to install on-site storm drainage infrastructure that would detain stormwater and release runoff at a rate no greater than the pre-development condition of the project site. General Plan Policy ES 7.3 requires stormwater management practices for new and redevelopment projects. Policies ES 7.4 and 8.1 allow for groundwater recharge. Policy ES 8.2 implements potable water demand reduction measures. Additional policies require further water efficiency upgrades and measures. City requirements and policies would ensure that runoff would not inundate downstream storm drainage facilities such that new or expanded facilities would be required. Impacts would be less than significant.

Electric Power, Natural Gas, and Telecommunications

Electricity, natural gas, and telecommunications utilities respond to increased demands in various ways. These may include temporary stoppages or rolling blackouts, extension of existing infrastructure, or construction of new facilities. Each of these utility providers prepares long-range plans to accommodate projected growth in their service areas. For example, PG&E provides annual sustainability reports that outline strategies to accommodate future growth and ensure reliability of electrical and natural gas service. For example, as indicated in the 2021 Corporate Sustainability Report, PG&E has requested approval for 387 megawatts (MW) of additional energy storage from six projects slated for completion by August 2023. These projects will provide "system reliability procurement that will help integrate increasing amounts of renewable energy and meet peak summer demand."[32] Telecommunications companies continually expand infrastructure to serve the growing population. These planning efforts take into account growth projections, including the growth under the proposed project. Because the proposed project would not result in unplanned growth, the majority of growth would be infill, and because the utility providers take into consideration all future growth projections in their planning efforts, the proposed project would not be expected to require or result in new or expanded electricity, natural gas, or telecommunications facilities beyond those already planned. Impacts would be less than significant.

Level of Significance

Less than significant impact.

Water

Impact UTIL-2:	**Sufficient water supplies would be available to serve the proposed project and reasonably foreseeable future development during normal, dry, and multiple dry years.**

Development accommodated under the proposed project could result in additional residents and businesses in the City. As described in Chapter 2, Project Description, the proposed project is expected to accommodate 40,068 new residents, 14,312 new housing units, 42,297 new jobs, and

[32] Pacific Gas and Electric Company (PG&E). 2022. Website: https://www.pgecorp.com/corp_responsibility/reports/2021/pf04_renewable_energy.html. Accessed June 14, 2022.

14,100,523 new square feet of nonresidential building space at buildout. This increase in development would result in an increased demand for potable water.

As previously stated in Section 3.15.2, Environmental Setting, the City of South San Francisco receives most of its water supply from Cal Water, with a small area (the Westborough neighborhood) serviced by the WWD. A significant impact would occur if water demand for development facilitated by the proposed project could not be met by the providers' existing entitlements and water supply resources.

The General Plan Update includes policies and actions that would reduce water demand of future buildout. Policy ES-5.3, 5.8, 5.9, and 7.2 require and encourage water usage reduction strategies in landscaping design, including waterwise planting pallets, conservative irrigation systems, alternative irrigation water sources, and green infrastructure. Policy ES-7.4 and 8.1 encourage pervious surfaces and groundwater recharge. Policy ES-8.2 requires the implementation of potable water demand reduction measures. Policy CP-3.2 requires regular updates to the City's building codes to improve the water efficiency of new construction and major renovation. Policy CP-4.1 aims to establish an energy and water efficiency upgrade program for existing buildings. Policy CP-8.3 requires the exploration of recycled water supply.

The CAP also includes actions that would reduce water demand from future buildout under the proposed project. Implementation of Action BE 1.2 would update zoning and building codes to require alternations or additions at least 50 percent the size of the original building to comply with minimum CALGreen requirements. Actions WW 1.1 through 1.4 would reduce outdoor water use through landscaping water requirements, alternative water sources, greywater systems, and landscaping plant lists. Actions WW-2.1 and 2.2 would reduce indoor water use through indoor water efficiency standards and the promotion of water conservation rebates. Action CL 1.1 and 1.2 would improve environmental efficiencies and performance of municipal buildings, facilities, landscaping and parks through minimum LEED™ certification or equivalent for new buildings and benchmarking the environmental performance of municipal buildings and facilities, including water use.

As indicated in Chapter 2, Project Description, the Westborough planning sub-area, which receives water from the WWD, is projected to see an increase of 524 residential units and 105 jobs as a result of the proposed project. WWD plans to continue to purchase wholesale water from the SFPUC RWS and does not anticipate developing additional long-term water supplies from other sources in the near future. Water supplies from the SFPUC RWS through 2045 are projected to be equivalent to WWD's ISG of 482 MG. The District's ISG is WWD's contractual entitlement to SFPUC wholesale water, which survives in perpetuity.[33]

Based on residential water demand factors provided by Cal Water in the absence of available data from WWD, the additional residences are expected to result in an increase of water demand within the Westborough planning sub-area of approximately to 23.8 MG per year.[34] This increase in water

[33] Westborough Water District (WWD). 2021. 2020 Urban Water Management Plan. June.
[34] Acre-feet per year were calculated based on water demand data provided by Cal Water for the South San Francisco District. This

demand represents 4.9 percent of total projected available supply (482 MG per year) within the WWD service area by 2040. Since the WWD UWMP's projected demand is based on general growth in its service area, the projected water demand from the proposed project, under normal water years, is accounted for in the overall demand forecast. Furthermore, sufficient water is available as evidenced by the fact that WWD purchased only between 56 and 68 percent of its 482 MG per year ISG, which ranged from 267 to 329 MG per year, leaving sufficient water available to serve the project in normal year conditions.

As previously discussed, significant water supply shortfalls are currently projected in future single and multiple dry years within the WWD due to the Bay-Delta Plan Amendment implementation (also as previously discussed). The WWDs Water Shortage Contingency Plan addresses the shortfall and would be applicable to all users including the proposed project. Because the project is planned growth and because the WWDs UWMP and Water Shortage Contingency Plan consider future planned growth, sufficient water supplies are expected to be available in single and multiple dry years with the implementation of the Water Shortage Contingency Plan.

It is assumed that the remainder of the proposed project (13,788 residential units, 42,192 jobs) would receive water supplies from the Cal Water South San Francisco District. To calculate approximate water demand at buildout, water demand factors from Cal Water were assigned to nonresidential, mixed use, and civic land use type square footages as provided in Chapter 2, Project Description, Table 2-7. See Table 3.15-11 for the water demand amount assigned to each land use type.

Table 3.15-11: Water Demand Rate Assignment and Calculation

Land Use Designation	Projected (Square Feet)	Applied Cal Water Demand Category	Cal Water Demand gpd/SF	Estimated Demand (Projected SF x gpd per SF)
Nonresidential				
Community Commercial	(3,626)	Retail	0.13	-471.38
Business Technology Park	721,680	Research and Development	0.21	151552.8
Business Technology Park High	7,788,187	Research and Development	0.21	1635519
Business and Professional Office	67,269	Office Space	0.13	8744.97
Mixed Industrial	83,600	Research and Development	0.21	17556

demand data was used as a proxy for water demand data for the WWD, as WWD demand data was unobtainable at the time of the analysis herein. Water demand for the 524 residencies expected to be added within the WWD service area was calculated by multiplying the 524 units by the average of multi-family (114 gpd per dwelling unit) and single-family (135 gpd per dwelling unit) demand rates or 124.5 gpd per dwelling unit. Water demand for the 105 jobs expected to be added within the WWD was not included in this calculation because square footage and use-type information related to those jobs solely within the WWD service area are unavailable. Water use of the 105 jobs is included within the demand calculations for Cal Water service. Both Cal Water and WWD ultimately receive water from the same source, San Francisco's Regional Water System (RWS), which is operated by the SFPUC, and therefore water use and source is fully considered within the analysis herein.

Land Use Designation	Projected (Square Feet)	Applied Cal Water Demand Category	Cal Water Demand gpd/SF	Estimated Demand (Projected SF x gpd per SF)
Mixed Industrial High	503,439	Research and Development	0.21	105722.2
Industrial Transition Zone	(42,247)	Research and Development	0.21	-8871.87
Mixed Use				
Low Density Mixed Use	(6,572)	Office Space/Retail	0.13	-427.18*
Lindenville Neighborhood Center	1,531	Office Space/Retail	0.13	99.515*
Grand Avenue Core	4,304	Office Space/Retail	0.13	279.76*
Medium Density Mixed Use	(263,306)	Office Space/Retail	0.13	-17114.9*
High Density Mixed Use	1,334,467	Office Space/Retail	0.13	86740.36*
East of 101 Mixed Use	433,685	Office Space/Retail	0.13	28189.53*
Downtown Transit Core	60,273	Office Space/Retail	0.13	3917.745*
East of 101 Transit Core	8,262,100	Office Space/Retail	0.13	537036.5*
Civic/Other				
Parks and Recreation	0	–	–	–
Open Space	0	–	–	–
Public	68,367	Auditorium/ Other	0.1	6836.7
School	613	Auditorium/ Other	0.1	61.3
Total Increased Water Demand at Buildout (gpd)				**2,555,371 gpd**
Total Increased Water Demand at Buildout (AFY)				**2,847 AFY**

Notes:
AFY = acre-feet per year
gpd = gallons per day
SF = square feet/square-foot
* Consistent with Table 2-7 in the project description, this assumes that nonresidential space from the Mixed-Use area is conservatively estimated to be 50 percent residential and 50 percent nonresidential space, therefore, 50 percent of mixed-use square footage is used to calculate nonresidential water usage.
Source: Shape SSF Growth Projections

The proposed project is anticipated to result in an increase of water demand with the Cal Water service area of approximately to 1,921 AFY[35] for new residential uses and up to 2,847 AFY (as shown in Table 3.15-11) for new commercial uses. The total new increase of approximately 4,768 AFY water demand represents approximately 59 percent of total projected demand within the Cal Water South San Francisco District service area by 2040. Since Cal Water's UWMP's projected demand is based on general growth in its service area, the projected water demand from the proposed project, under normal water years, is accounted for in the overall demand forecast. Further, the Cal Water 2020 UWMP states that the purchased supplies from the RWS, along with groundwater supply to the South San Francisco District, will be sufficient to serve normal year demands through 2045.

As previously discussed, and much like that of the WWD, significant water supply shortfalls are currently projected in future single and multiple dry years within the Cal Water South San Francisco District due to the Bay-Delta Plan Amendment implementation (also as previously discussed). Alternatively, the SFPUC provided water supply reliability projections without the Bay-Delta Plan Amendment which indicated that SFPUC would be able to supply 100 percent of the projected RWS demands in all year types through 2045, except for fourth and fifth consecutive dry years in 2045, during which 90 percent of projected RWS demands would be met. As noted in the Cal Water 2020 UWMP, the large disparity in projected water supply reliability between these two scenarios demonstrate the current level of uncertainty.

Cal Water's Water Shortage Contingency Plan addresses the shortfall and would be applicable to all users including the proposed project. Because the project is planned growth and because Cal Water's UWMP and Water Shortage Contingency Plan consider future planned growth, sufficient water supplies are expected to be available in single and multiple dry years with the implementation of the Water Shortage Contingency Plan.

In summary, while development facilitated by the proposed project would result in an increased demand for both potable and recycled water, the UWMPs determined that the water supply will be sufficient to accommodate future demand in the service area through 2045, under normal water years. However, water shortages have been identified under single and multiple dry year scenarios. If the water districts should experience a shortage of supply during a drought, water consumption reduction measures would be implemented in accordance with the applicable UWMP. Any direction by the water districts for reduced consumption would be applicable to all City customers, not only the increased demand resulting from the proposed project.

In addition, with SB X7-7 and the State and County water conservation ordinances in place, each jurisdiction within the water service area is required to conserve its water use through establishing water efficiency measures. As required by the General Plan Update, the City of South San Francisco will continue to coordinate with regional water districts regarding water conservation efforts, demand management measures promoted by the water districts, compliance with current CALGreen measures and South San Francisco CAP measures promoting efficient indoor and outdoor water use.

[35] 13.788 residences multiplied by Cal Water average residential water usage of 124.5 gpd/DU

These measures would serve to reduce water use and demand overall and especially during drought years.

If larger development projects occur within the Planning Area, such development would be subject to SB 610 and SB 221, which require preparation of a WSA to confirm whether current and projected water supplies could accommodate the development as proposed. Other development projects would be required to obtain a will-serve letter from the water district.

Furthermore, Cal Water has stated that it intends to adopt a Water Neutral Development Policy in the near future, which would require any new residential, commercial, or industrial development within the South San Francisco District that is expected to use 50 AFY or more in net new demand to offset its net increase in water demand. Once adopted, future development consistent with the proposed project would be required to comply with the proposed Development Offset Program. Compliance with the Development Offset Program would help ensure that overall customer demand for water does not exceed available current or future supply under a range of hydrologic conditions. However, until the Development Offset Program is finalized it is too speculative to analyze.

In conclusion, given that both Cal Water and WWD have considered projected growth, including ABAG projected growth, and have determined that sufficient water supplies are anticipated to be available to accommodate future demands of development within their service areas, compliance with future water reductions under dry year scenarios, compliance with the policies and actions in the General Plan Update, compliance with SB 610 and SB 221, provision of will-serve letters, and compliance with existing water conservation regulations and drought plans, would ensure that impacts related to water supply remain less than significant**.** Additionally, compliance with the Water Neutral Development Policy, would provide additional assurance that impacts to water supply remain less than significant, once adopted.

Level of Significance

Less than significant impact.

Wastewater Treatment

Impact UTIL-3: The wastewater treatment provider would have adequate capacity to serve the proposed project in addition to the provider's existing commitments.

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area. The majority of potential growth would occur within the East of 101, Lindenville, Downtown, and El Camino planning sub-areas while smaller areas of potential growth are identified in the Westborough neighborhood. (Chapter 2, Project Description, Exhibit 2-5). Additionally, the proposed project may result in other private and public improvements throughout the City with the potential for environmental effects related to wastewater treatment capacity (see Sections 2.5.2 and 2.5.6, Chapter 2, Project Description).

As described in Chapter 2, Project Description, the proposed project is expected to accommodate 40,068 new residents, 14,312 new housing units, 42,297 new jobs, and 14,100,523 new square feet of nonresidential building space at buildout. Development and growth in the City would increase

demand for wastewater treatment capacity. As the demand for wastewater treatment capacity increases, there may be a need to increase wastewater conveyance and treatment facilities, the construction of which could cause environmental impacts.

The General Plan Update includes policies and actions to ensure that wastewater treatment capacity keeps pace with new development. Policies ES-8.3 and CP-3.2 encourage water consumption reduction measures which would, in turn, reduce wastewater generation. Policy CP-4.3 encourages greywater permitting to use for irrigation. Policy LU-8.10 ensures adequate infrastructure and utilities for all future development. Policy CP-8.1 requires the continuous evaluation and, as appropriate, system replacement at the wastewater treatment plant to reduce energy use. The CAP includes Action 1.2, which explores options at the South San Francisco/San Bruno WQCP for delivering non-potable, recycled water for reuse.

The South San Francisco/San Bruno WQCP has experienced an average per capita flow rate over the last 10 years of 79 gallons per day (gpd). Applying this factor to the proposed project's increase in population under the proposed project of 38,444[36] (outside the Westborough neighborhood), an additional 3,037,076 gpd[37] or 3.03 MGD of wastewater would be produced.

Average per capita flow rate for the North San Mateo County Sanitation District treatment plant was not obtainable at the at the time of this analysis. Therefore, South San Francisco/San Bruno WQCP's per capita flow rate was utilized as a proxy. Applying this factor to the proposed project's increase in population under the proposed project within the Westborough neighborhood of 1,624,[38] an additional 130,666[39] gpd or 0.13 MGD of wastewater would be produced.

In accordance with City requirements, new development that occurs pursuant to the proposed project would be required to connect to the municipal sewer system. New development would be subject to the latest adopted edition of the California Plumbing Code and CALGreen Code including the provisions for water-efficient fixtures and toilets, which would reduce the amount of effluent entering the wastewater system.

As indicated in the South San Francisco SSMP, because few vacant lands exist East of 101, the anticipated increase in sewer flows would be a result of redevelopment of existing parcels. This is consistent with much of the proposed project's potential growth identified as occurring within the East of 101, Lindenville, Downtown, and El Camino planning sub-areas.

Both the City of South San Francisco and the WWD maintain SSMPs as required under the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems. The management plans are audited bi-annually and updated every 5 years. These updates allow for the consideration of development and redevelopment such as would occur under the proposed project. As such, the

[36] Total population increase at buildout is expected to be 40,068, however, the Westborough neighborhood is served separately by WWD. Therefore the 524 residential units planned in the Westborough neighborhood and their respective 1,624 persons (based on a household population of 3.10 persons per California Department of Finance 2021 estimates) are subtracted from the total population increase as they would be served by the WWD and wastewater rates are calculated separately.

[37] Calculated as 38,444 x 79.

[38] Calculated as 524 x 3.10.

[39] Calculated as 1,624 x79

potential for increased wastewater generation and its need for transmission has been and will continue to be planned for by both the City of South San Francisco and the WWD.

All newly generated wastewater would be directed to either the South San Francisco/San Bruno WQCP or the North San Mateo County Sanitation District treatment plants. As shown in Table 3.15-11, the WQCP has a design capacity to treat 13 MGD average daily flow. The average dry weather flow through the facility is 7 MGD. Peak wet weather flows can exceed 60 MGD.[40] The North San Mateo County Sanitation District treatment plant has a permitted capacity and design capacity of 10.3 MGD (dry weather flows). Average dry weather flow is 5.6 MGD and peak wet weather flows can reach 15 MGD.

Table 3.15-12: Wastewater Treatment Generation and Capacity

Treatment Plant	Design Capacity (MGD)	Permitted Capacity (MGD)	Average Flows (MGD)		Available Dry Weather Capacity[2]	Project Generation (MGD)[1]
			Dry Weather	Peak Wet Weather		
South San Francisco/ San Bruno WQCP	13	13	7	60	6	3.0
North San Mateo County Sanitation District Treatment Plant	10.3	10.3	5.6	15	4.7	0.13

Notes:
MGD = million gallons per day WQCP = Water Quality Control Plant
[1] Based on a multiplier of 79 gallons per capita per day.
[2] Dry weather average flows minus permitted capacity.
Source: City of South San Francisco. 2022. Water Quality Control Plant (WQCP). Website: https://www.ssf.net/departments/public-works/water-quality-control-plant. Accessed April 11, 2022.
Krauss, Greg. Chief of Operations, Water and Wastewater, City of Daly City. 2022. Personal communication: telephone. March 19.
Schumacker, Brian, MPA. Plant Superintendent, Project Manager, Chief Plant Operator, South San Francisco/San Bruno Water Quality Control Plant (WQCP). Personal communication: email. April 19, 2022.
Talbot, Nicolas. Assistant Plant Superintendent, South San Francisco/San Bruno Water Quality Control Plant (WQCP). Personal communication: email. April 28, 2022.

The two wastewater treatment plants serving the City of South San Francisco have a combined capacity to treat up to 23.3 MGD and currently have additional dry weather capacity of approximately 14.6 MGD. The 3.13 MGD of wastewater generated by new development under the proposed project would represent 23.3 percent of total treatment capacity of the wastewater treatment plants. As shown in Table 3.15-11, both wastewater treatment plants have capacity to handle the proposed project's increase in wastewater.

In conclusion, while development facilitated by the proposed project would result in an increase in the demand for wastewater collection and treatment, the wastewater collection systems and treatment plants have sufficient capacity to support new infill development within the Planning Area. The City's Sewer Capacity Charge reduces impacts caused by future development and

[40] City of South San Francisco. 2022. Water Quality Control Plant. Website: https://www.ssf.net/departments/public-works/water-quality-control-plant. Accessed April 11, 2022.

redevelopment in the City by financing the replacement and renewal of existing sanitary sewer facilities and the upgrade and construction of new sanitary sewer facilities. Furthermore, the Storm Water Management Plans (SWMPs) include consideration of future growth in the City such as that of the proposed project. Finally, the City's Capital Improvement Plan includes projects covering both the wastewater system and the WQCP. Therefore, impacts related to wastewater collection and treatment would be less than significant.

Level of Significance

Less than significant impact.

Solid Waste

Impact UTIL-4:	**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. In addition, the proposed project would comply with federal, State, and local statutes and regulations related to solid waste.**

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area with the potential for environmental effects related to the generation of solid waste (see Chapter 2, Project Description, Sections 2.5.2 and 2.5.6).

As described in Chapter 2, Project Description, the proposed project is expected to accommodate 40,068 new residents, 14,312 new housing units, 42,297 new jobs, and 14,100,523 new square feet of nonresidential building space at buildout. Development and growth in the City would increase the generation of solid waste (both temporary construction and permanent operation waste) which could exceed State or local standards, exceed local infrastructure capacity, or otherwise impair the attainment of solid waste reduction goals.

The General Plan Update includes policies and actions to reduce and divert solid waste. Policy CP-5.4 requires 75 percent waste diversion for municipal construction and demolition projects. Policy CP-6.1 requires maintenance and regular updates of the City's waste reduction plans and programs to ensure consistency with California's waste reduction goals. Policy CP-6.2 develops education and technical assistance programs to help all residents and businesses to compost and recycle.

The CAP also includes actions to reduce and divert solid waste. Implementation of Action SW 1.1 would adopt an AB 1383 compliant zero-waste plan for municipal operations and the community. Implementation of Action SW 1.2 entails the City continuing to work with SSF Scavenger to ensure implementation of waste reduction targets. Implementation of Action SW 1.3 establishes compliance pathways and enforcement mechanisms for mandatory organics and food waste diversion. Action SW 1.4 would develop educational and technical assistance programs to help all residents and businesses to compost and recycle. Implementation of Action CL 1.4 requires municipal construction projects to achieve 75 percent waste diversion from the landfill.

In accordance with City requirements, development that occurs pursuant to the proposed project would be required to be served with solid waste, recycling, and green waste services provided by the

City's franchise hauler (Municipal Code Chapter 8.16). Additionally, construction and demolition debris from new development would be required to be recycled (Municipal Code Chapter 15.60). Statewide ordinances, including AB 341, AB 939, SB 1016, and SB 1383 require waste reduction, recycling, and diversion and would also be applicable to development occurring pursuant to the proposed project.[41]

Construction waste would be temporary and would be required to be diverted from landfills in accordance with Municipal Code Chapter 15.60. As indicated therein, diversion efforts would include deconstructing and salvaging all or part of structures to be demolished (as practicable) and directing one hundred percent of inert solids to reuse or recycling facilities approved by the City. In addition, diversion would be accomplished by either taking all mixed construction and demolition debris to mixed construction and demolition debris recycling facilities approved by the City and taking all sorted or crushed construction and demolition debris to approved facilities, or source separating noninert materials such as cardboard and paper, wood, metals, green waste, new gypsum wallboard, tile, porcelain fixtures, and other easily recycled materials, and directing them to recycling facilities approved by the City and taking the remainder to a facility for disposal. Operationally, development under the proposed project would be estimated to generate approximately 59,014.2 tons or 42,153.0 cubic yards of solid waste at full buildout.

Table 3.15-13: Estimated Solid Waste Generation

Category	Net New Population	Disposal Rate[1] (pounds/capita/day)	Daily Solid Waste Generation at Buildout		Annual Solid Waste Generation at Buildout	
			pounds/capita/day	tons	tons	cubic yards[3]
New Residents	40,068	4.3	172,292	86.1	31,426.5	22,447.5
New Jobs	42,297	5.0	211,485	105.7	27,587.7[2]	19,705.5
TOTAL			**383,777**	**191.8**	**59,014.2**	**42,153.0**

[1] Disposal rate based on CalRecycle's calculated disposal rate for 2020 (most recent available information)
[2] Assumes 261 working days per year.
[3] One cubic yard = 1.4 tons
Source: Calculated Disposal Rate: CalRecycle Disposal Rate Calculator. Website: https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/DisposalRateCalculator. Accessed April 12, 2022.

For the solid waste that would be landfilled, the four landfills shown in Table 3.15-11 have a combined remaining capacity of 43.43 million cubic yards. The solid waste generated by the proposed project would represent approximately 0.09 percent of the remaining capacity of the servicing landfills. This capacity would be more than sufficient to accommodate the solid waste generated by implementation of the General Plan Update. Furthermore, as previously discussed, all future development projects proposed in the City would be required to abide by and be consistent with federal, State, and local statutes and regulations related to solid waste, including the California Health and Safety Code, California Code of Regulations, California Public Resources Code, and City of

[41] City of South San Francisco. 2022. Ordinances and Laws. Website: https://www.ssf.net/departments/public-works/solid-waste-recycling/ordinances-laws. Accessed April 12, 2022

South San Francisco General Plan and Municipal Code. Therefore, the impact would be less than significant.

Level of Significance

Less than significant impact.

3.15.7 - Cumulative Impacts

This analysis evaluates whether the impacts of the proposed project, together with the impacts of cumulative development, would result in a cumulatively significant impact with respect to water supply, wastewater, solid waste, or storm drain facilities. This analysis then considers whether incremental contribution of impacts associated with the implementation of the proposed project would be significant. Both conditions must apply for a project's cumulative effects to rise to the level of significance.

Water Supply

The geographic context for the analysis of cumulative impacts related to water supply includes the Cal Water South San Francisco District and WWD service areas. Overall, as described in detail above, cumulative water demands would neither exceed planned levels of supply nor require building new water treatment facilities or expanding existing facilities beyond what is currently planned under normal hydrologic years. Under single dry and multiple dry years, water supply availability is uncertain. However, each individual project would be required to demonstrate the availability of water to service the development. Cumulative projects would be required to demonstrate compliance with the statutory requirements listed in the regulatory section, and the General Plan Update would ensure that cumulative development in the City will continue to comply with the State and federal regulatory requirements. As discussed under Impact UTIL-2, if the water service providers should experience a shortage of supply during a drought, water use reduction plans and Water Shortage Contingency Plans are in place to reduce water consumption. These measures would be implemented in conjunction with other State, County, and local water conservation requirements and water efficiency measures. All cumulative projects would be subject to local, State, and federal permit requirements and would be required to comply with City/County ordinances and General Plan policies, as well as other regulations that address water supply. For these reasons, cumulative impacts are less than significant. The proposed project's contribution to less than significant cumulative impacts would not be cumulatively considerable. Development facilitated by the General Plan would contribute to an increased cumulative demand for water supply, however, the growth within the water purveyor's service areas has been considered in their UWMPs. Additionally, development consistent with the proposed project would be required to follow multiple water reduction policies outlined in the General Plan Update, CAP, and Municipal Code.

As previously discussed, development facilitated by the proposed project would be required to conform with federal, State, and local policies that would reduce water supply impacts to less than significant levels. When applicable, any additional new development within the Planning Area would be subject, on a project-by-project basis, to independent CEQA review as well as policies in the General Plan, the Municipal Code, and compliance with current regulations, including and SB 610 and SB 221, which require WSAs for large development projects prior to approval. Accordingly,

development consistent with the proposed project would have a less than significant contribution to cumulative impacts.

For these reasons, development consistent with the proposed project in conjunction with other cumulative projects would not be cumulatively considerable and the proposed project's incremental contribution would be less than significant. Additionally, compliance with Cal Water's anticipated future Water Neutral Development Policy, where new developers would pay a Development Offset Fee to offset their water demand with efficiency improvements elsewhere in the system, would further ensure that the proposed project's incremental contribution to less than significant cumulative impacts would not be cumulatively considerable.

Wastewater

The geographic context for the analysis of cumulative impacts related to wastewater conveyance and treatment includes the Cal Water South San Francisco District and WWD service wastewater services areas. All cumulative projects would be required to comply with City/County ordinances and General Plan policies, as well as other regulations related to wastewater collection and treatment. As described under Impact UTIL-3, the sufficient wastewater conveyance and treatment capacity is available to serve the proposed project. As such, cumulative impacts to wastewater would be less than significant.

Additionally, the proposed project's contribution to less than significant cumulative impacts would not be cumulatively considerable. While development facilitated by the proposed project would result in an increased demand for wastewater collection and treatment, such wastewater collection and treatment can be accommodated (see Impact UTIL-3). In addition, future projects within the Planning Area would be required to comply with requirements of the General Plan and Municipal Code that aim to reduce wastewater generation flows. For the reasons described above, impacts of the proposed project related to wastewater conveyance and treatment in conjunction with other cumulative development is not cumulatively considerable. The proposed project's contribution to cumulative impacts would be less than significant.

Solid Waste

The geographic context for the analysis of cumulative impacts related to solid waste includes the jurisdictions that are served by the Corinda Los Trancos and Newby Island Landfills. Cumulative development within other jurisdictions would contribute to an incremental increase in solid waste delivered to these landfills and other landfills in the region. Other future projects within the cumulative geographic context, would be required to comply with federal, State, and local laws and policies to address potential impacts related to solid waste. For these reasons, cumulative impacts to solid waste would be less than significant.

Additionally, the proposed project's contribution to less than significant cumulative impacts would not be cumulatively considerable. While development and growth in the City under the proposed project would result in an increased generation of solid waste, the affected landfills and other regional landfills have enough capacity to serve the City (see Impact UTIL-4). In addition, development facilitated by the proposed project would be required to comply with policies and

programs of the General Plan and the regulations of the Municipal Code that aim to divert solid waste from the local landfill. The City would also be required to comply with existing and new federal, State, and local statutes and regulations related to solid waste (See UTIL-4). Therefore, as discussed, development consistent with the General Plan would have a less than significant contribution to cumulative impacts.

Storm Drainage

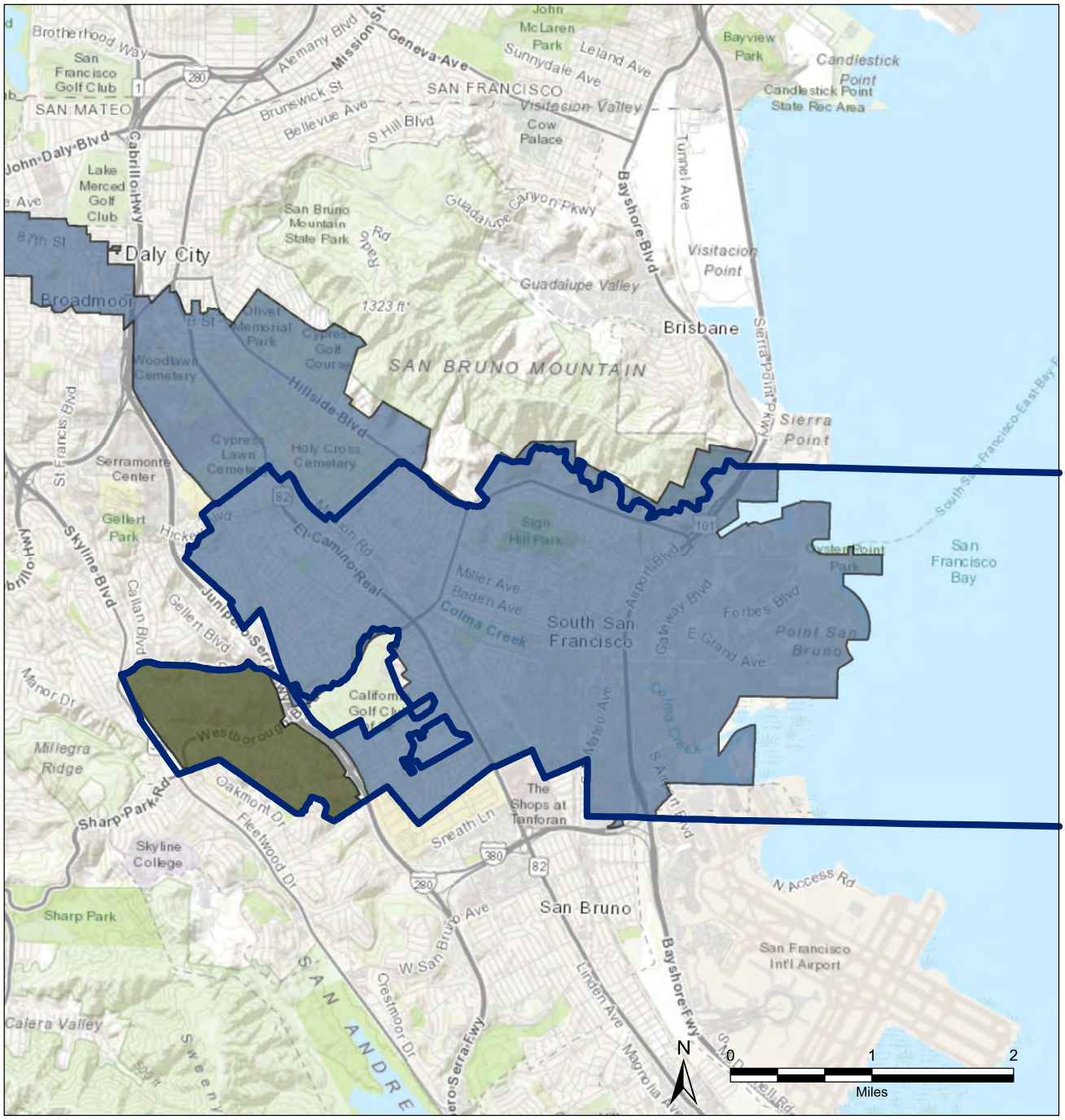
The geographic context for analysis of cumulative impacts to storm drain facilities includes the lands surrounding the Planning Area. Cumulative development contributes to an incremental increase in impervious surfaces that could increase stormwater runoff and impact existing storm drain facilities requiring relocated or new facilities. All cumulative projects would be required to comply with City/County ordinances and General Plan policies, as well as other regulations that minimize stormwater runoff, such as the CWA. For these reasons, cumulative impacts to storm drainage would be less than significant.

As discussed under Impact UTIL-1, the proposed project's contribution to less than significant cumulative impacts would not be cumulatively considerable. The General Plan Update contains policies and programs to reduce stormwater runoff. Likewise, the sections of the Municipal Code that protect water quality also minimize stormwater runoff, such as Chapter 11.17 and 11.18. All future development under the proposed project would also be required to comply with the CWA and regulations enforced by the RWQCB, which reduce stormwater runoff. Therefore, as discussed, development consistent with the General Plan would have a less than significant contribution to cumulative impacts.

In conclusion, cumulative impacts on utilities and service systems are less than significant with implementation of regulatory requirements including General Plan policies and actions, and Municipal Code regulations. Additionally, the collective, cumulative mitigating benefits of the General Plan and Municipal Code discussed above, are intended to reduce the proposed project's contribution to cumulative utility impacts to below a level of significance.

Level of Cumulative Significance

Less than significant impact.



Legend

- City of South San Francisco
- Westborough Water District Service Area
- California Water Service South San Francisco District

Sources

World Topographic base map provided by ArcGIS Online

Source: EKI Environment & Water, June 2021.

Exhibit 3.15-1

Cal Water South San Francisco Water District and Westborough Water District

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3.16 - Wildfire

3.16.1 - Introduction

Wildfires are a significant concern throughout the State. Approximately 85 percent of all fire ignitions in California are the result of human activities, and the rest are a result of lightning.[1] The California wildfire season usually takes place between spring and late fall.[2] Wildfire risk is determined by a combination of factors including precipitation, winds, temperature, and landscape and vegetation conditions. In addition to the direct impacts of wildfire, smoke can be a significant source of air quality pollution. Emissions from wildfires can lead to excessive levels of particulate matter, carbon monoxide, nitrogen oxides, and various volatile organic compounds.

This section of the Draft Program Environmental Impact Report (Draft Program EIR) analyzes impacts related to wildfire within the South San Francisco General Plan Update Planning Area (Planning Area) resulting from implementation of the General Plan Update, Zoning Code Amendments, and Climate Action Plan (collectively referred to herein as the proposed project). Future discretionary projects facilitated by the proposed project will be evaluated for project-specific impacts with respect to wildfire at the time they are proposed. See Section 3.13, Public Services and Recreation, for a discussion of fire protection services.

No comments were received during the Notice of Preparation (NOP) comment period related to wildfire.

The descriptions and analysis in this section are based, in part, on statements, data, and figures provided by the following reference materials:

- South San Francisco General Plan Update.
- South San Francisco Municipal Code.
- 2021 San Mateo County Multijurisdictional Local Hazard Mitigation Plan (LHMP).
- California Department of Forestry and Fire Protection (CAL FIRE) Fire Hazard Severity Zone Maps.
- San Mateo–Santa Cruz County Community Wildfire Protection Plan (CWPP).

3.16.2 - Environmental Setting

Wildfire Hazard Area Designations

Land uses in the Planning Area are primarily urban and developed, with pockets of parks and open space areas, including Sign Hill Park.

[1] California Energy Commission (CEC). 2018. Statewide Summary Report. California's Climate Change Assessment. Publication number: SUM-CCCA4-2018-013.Website: https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf . Accessed May 26, 2022.

[2] Bay Area Air Quality Management District (BAAQMD). 2022. Wildfire Safety. Website: https://www.baaqmd.gov/about-air-quality/wildfire-air-quality-response-program/wildfire-safety. Accessed May 26, 2022.

According to CAL FIRE, the Planning Area is not located in a State Responsibility Area (SRA) or a Local Responsibility Area (LRA) Fire Hazard Severity Zone (FHSZ) (Exhibit 3.16-1).[3] The Planning Area is identified as Non-Very High Fire Hazard Severity Zone (VHFHSZ) within an LRA and adjacent to land identified as Moderate FHSZ within an SRA and High FHSZ within an SRA (San Bruno Mountain State Park). Land identified as High FHSZ within an SRA is located approximately 0.75 mile south of the Planning Area, on the western side of State Route (SR) 35. Land identified as a VHFHSZ within an SRA is located approximately 2.8 miles south of the Planning Area, west of San Andreas Lake.

Wildfire-conducive Conditions

Grasslands and other vegetation in California easily ignite, particularly in dry seasons. Wildfire is a serious hazard in high dry fuel load areas, particularly near areas of natural vegetation and steep slopes since fires tend to burn more rapidly on steeper terrain. Wildfire is also a serious hazard in areas of high wind, given that fires will travel faster and farther geographically when winds are higher. Furthermore, wildfire is more likely in areas where electric power lines are located above ground where they may encounter vegetation or building materials.

While there are no Very High, High, or Moderate FHSZ within the City limits, Sign Hill Park, located in the northern part of the City between the Paradise Valley/Terrabay and Sign Hill sub-areas (Exhibit 2-6), is susceptible to wildfires as evidenced by a fire that occurred in October 2020. The brush fire was started by two South San Francisco juveniles on the south side of Sign Hill just before 12:00 p.m. and grew to four alarms quickly due to the hot, dry, and windy conditions. The fire was contained after several hours, and because of the extraordinary efforts of all agencies involved, there were no injuries reported and no structures lost.[4] Sign Hill Park currently contains native grasses, scrubland habitat, non-native and native trees, and trees killed in the 2020 fire. In the City, the Sign Hill, Paradise Valley, and Sunshine Gardens neighborhoods are particularly at risk due to their proximity to Sign Hill Park and the San Bruno Mountain foothills.

Fire Protection and Emergency Medical Services

Northern California

CAL FIRE is responsible for fire protection and stewardship of over 31 million acres of California's privately owned wildlands. CAL FIRE also provides varying levels of emergency services in 36 of the California's 58 counties via contracts with local governments. Because of the Department's size and major incident management experience, it is often asked to assist or take the lead in disasters.[5] In October 2017, a series of wildfires occurred in Northern California resulting in extensive property damage. In November 2018, the Camp Fire wildfire occurred in Northern California, resulting in the deadliest wildfire to occur in State history.[6] In September and October 2020, the Glass Fire burned

[3] California Department of Forestry and Fire Protection (CAL FIRE). Fire Hazard Severity Zone Viewer. Website: http://egis.fire.ca.gov/FHSZ/. Accessed February 16, 2022.

[4] South San Francisco Police Department. 2020. Media Release – South San Francisco Sign Hill Fire. Website: https://www.ssf.net/home/showpublisheddocument/21681/637385206357030000. Accessed February 28, 2022.

[5] California Department of Forestry and Fire Protection (CAL FIRE). 2022. About Us. Website: https://www.fire.ca.gov/about-us/. Accessed February 16, 2022.

[6] California Department of Forestry and Fire Protection (CAL FIRE). 2021. Top 20 Deadliest California Wildfires. Website: https://www.fire.ca.gov/media/lbfd0m2f/top20_deadliest.pdf. Accessed February 16, 2022.

over 67,484 acres and destroyed 1,555 structures, including 308 homes and 343 commercial buildings in Napa County, as well as 334 homes in Sonoma County.[7]

South San Francisco Fire Department

The South San Francisco Fire Department (SSFFD) provides services in fire suppression and prevention, emergency medical services, urban and marine search and rescue, hazardous materials, public education, and disaster preparedness. The SSFFD has firefighters and paramedics located in five different fire stations throughout the City and is dispatched to a variety of incidents, including structure fires, hazardous materials, medical calls, and traffic accidents.[8] The SSFFD manages and maintains emergency plans and training of City staff and community members. For example, the Community Emergency Response Team (CERT) program educates volunteers about disaster preparedness for the hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations.[9] For additional details regarding fire station locations, response areas, and response times, please see Section 3.13, Public Services and Recreation.

Post-fire Slope Instability and Drainage Pattern Changes

Slope instability from wildfire scarring of the landscape can result in more intensive flooding and landslides. These post-fire slope soils and altered drainage patterns can more easily creep away downslope sides of foundations and can also reduce lateral support.

The major post-wildfire hazards in the Planning Area are unstable hill slopes and altered drainage patterns. Slopes may suffer landslides, slumping, soil slips, and rockslides. As described in Section 3.6, Geology, Soils, and Seismicity, portions of the City are hilly and underlain with weak bedrock with slopes greater than 15 percent and have the greatest susceptibility to landslides (Exhibit 3.6-4). In the Paradise Valley/Terrabay area, slopes required extensive stabilization, drainage improvements, and seismic mitigations when subdivisions were built. The slopes still pose a hazard, with elevated wildfire risk and rockfall risk. Sign Hill Park currently contains native grasses, scrubland habitat, non-native and native trees, and trees killed in the 2020 fire.

3.16.3 - Regulatory Framework

Federal

United States Department of Interior

Review and Update of the 1995 Federal Wildland Fire Management Policy

1. Safety—Firefighter and public safety is the first priority. All Fire Management Plans and activities must reflect this commitment.

[7] California Department of Forestry and Fire Protection (CAL FIRE). 2020. Glass Fire. Website: https://www.fire.ca.gov/incidents/2020/9/27/glass-fire/. Accessed February 16, 2022.

[8] City of South San Francisco Fire Department. 2022. About Us. Website: https://www.ssf.net/departments/fire/about-us. Accessed February 22, 2022.

[9] City of South San Francisco Fire Department (SSFFD). 2022. Emergency Preparedness. Website: https://www.ssf.net/departments/fire/emergency-preparedness. Accessed February 22, 2022.

2. Fire Management and Ecosystem Sustainability—The full range of fire management activities will be used to help achieve ecosystem sustainability, including its interrelated ecological, economic, and social components.
3. Response to Wildland Fire—Fire, as a critical natural process, will be integrated into land and resource management plans and activities on a landscape scale, and across agency boundaries. Response to wildland fire is based on ecological, social, and legal consequences of the fire. The circumstances under which a fire occurs, and the likely consequences on firefighter and public safety and welfare, natural and cultural resources, and values to be protected dictate the appropriate management response to the fire.
4. Use of Wildland Fire—Wildland fire will be used to protect, maintain, and enhance resources and, as nearly as possible, be allowed to function in its natural ecological role. Use of fire will be based on approved Fire Management Plans and will follow specific prescriptions contained in operational plans.
5. Rehabilitation and Restoration—Rehabilitation and restoration efforts will be undertaken to protect and sustain ecosystems, public health, and safety, and to help communities protect infrastructure.
6. Protection Priorities—The protection of human life is the single, overriding priority. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources will be based on the values to be protected, human health and safety, and the costs of protection. Once people have been committed to an incident, these human resources become the highest value to be protected.
7. Wildland Urban Interface—The operational roles of federal agencies as partners in the wildland urban interface are wildland firefighting, hazardous fuels reduction, cooperative prevention and education, and technical assistance. Structural fire suppression is the responsibility of tribal, State, or local governments. Federal agencies may assist with exterior structural protection activities under formal Fire Protection Agreements that specify the mutual responsibilities of the partners, including funding. (Some federal agencies have full structural protection authority for their facilities on lands they administer and may also enter into formal agreements to assist State and local governments with full structural protection.)
8. Planning—Every area with burnable vegetation must have an approved Fire Management Plan. Fire Management Plans are strategic plans that define a program to manage wildland and prescribed fires based on the area's approved land management plan. Fire Management Plans must provide for firefighter and public safety; include fire management strategies, tactics, and alternatives; address values to be protected and public health issues; and be consistent with resource management objectives, activities of the area, and environmental laws and regulations.
9. Science—Fire Management Plans and programs will be based on a foundation of sound science. Research will support ongoing efforts to increase our scientific knowledge of biological, physical, and sociological factors. Information needed to support fire management will be developed through an integrated interagency fire science program.

Scientific results must be made available to managers in a timely manner and must be used in the development of land management plans, Fire Management Plans, and implementation plans.

10. Preparedness—Agencies will ensure their capability to provide safe, cost-effective fire management programs in support of land and resource management plans through appropriate planning, staffing, training, equipment, and management oversight.
11. Suppression—Fires are suppressed at minimum cost, considering firefighter and public safety, benefits, and values to be protected, consistent with resource objectives.
12. Prevention—Agencies will work together and with their partners and other affected groups and individuals to prevent unauthorized ignition of wildland fires.
13. Standardization—Agencies will use compatible planning processes, funding mechanisms, training and qualification requirements, operational procedures, values to be protected methodologies, and public education programs for all fire management activities.
14. Interagency Cooperation and Coordination—Fire management planning, preparedness, prevention, suppression, fire use, restoration and rehabilitation, monitoring, research, and education will be conducted on an interagency basis with the involvement of cooperators and partners.
15. Communication and Education—Agencies will enhance knowledge and understanding of wildland fire management policies and practices through internal and external communication and education programs. These programs will be continuously improved through the timely and effective exchange of information among all affected agencies and organizations.
16. Agency Administrator and Employee Roles—Agency administrators will ensure that their employees are trained, certified, and made available to participate in the wildland fire program locally, regionally, and nationally as the situation demands. Employees with operational, administrative, or other skills will support the wildland fire program, as necessary. Agency administrators are responsible and will be held accountable for making employees available.
17. Evaluation—Agencies will develop and implement a systematic method of evaluation to determine effectiveness of projects through implementation of the 2001 Federal Fire Policy. The evaluation will assure accountability, facilitate resolution of areas of conflict, and identify resource shortages and agency priorities.

State

California Emergency Response Plan

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Responding to wildfire incidents is one part of this plan. The plan is administered by the California Governor's Office of Emergency Services, which coordinates the responses of other agencies. The County Office of the Sheriff's Emergency Services Division coordinates response to emergencies in unincorporated areas of the County.

Emergency response team members respond and work with local fire and police agencies, emergency medical providers, the California Highway Patrol, CAL FIRE, the California Department of Fish and Wildlife (CDFW), and California Department of Transportation (Caltrans).

California Department of Forestry and Fire Protection Threat Potential Mapping

CAL FIRE has mapped fire threat potential throughout California, based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The threat levels include no fire threat, Moderate, High, and Very High fire threat. Further, the maps designate the County as the LRA for the project site. Additionally, CAL FIRE produced a 2010 Strategic Fire Plan for California, which contains goals, objectives, and policies to prepare for and mitigate the effects of fire on California's natural and built environments. CAL FIRE's Office of the State Fire Marshal provides oversight of enforcement of the California Fire Code as well as overseeing hazardous liquid pipeline safety.

California Building Code

The State of California provided a minimum standard for building design through the 2019 California Building Standards Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations. The 2019 CBC is based on the 2018 International Building Code and has been modified for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local City and County building officials for compliance with the CBC. Typical fire safety requirements of the CBC include the installation of sprinklers in all new high-rise buildings and residential buildings; the establishment of fire resistance standards for fire doors and building material; and specific types of construction.

California Public Resources Code

The California Public Resources Code includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that use an internal combustion engine; [10] specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on-site for various types of work in fire-prone areas.

These regulations include the following:

- Earthmoving and portable equipment with internal combustion engines shall be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (Public Resources Code [PRC] § 4442).
- Appropriate fire suppression equipment shall be maintained during the highest fire danger period—from April 1 to December 1 (PRC § 4428).
- On days when a burning permit is required, flammable materials shall be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the

[10] A spark arrestor is a device that prohibits exhaust gases from an internal combustion engine from passing through the impeller blades where they could cause a spark. A carbon trap is commonly used to retain carbon particles from the exhaust.

construction contractor shall maintain the appropriate fire suppression equipment (PRC § 4427).

- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines shall not be used within 25 feet of any flammable materials (PRC § 4431).

Regional

Association of Bay Area Governments Hazard Mitigation Plan

The Association of Bay Area Governments (ABAG) multijurisdictional LHMP for the San Francisco Bay Area was updated in 2010 in partnership with the Bay Conservation and Development Commission Adapting to Rising Tides Program to support local governments in the regional plan for existing and future hazards of climate change. This detailed 5-year plan identifies potential natural and human-made hazards, assesses their potential risks, and includes mitigation methods to reduce risks. The potential hazards identified in the plan include earthquakes and liquefaction, wildfires, floods, drought, solar storms, dam or levee failure, disease outbreak, freezes, wind, heat, thunder and lightning storms, siltation, tornadoes, hazardous materials, slope failure and mudflows, and other hazards. Similarly, mitigation measures include hazard event planning, emergency preparedness coordination, education, facility upgrades, and monitoring actions.

San Mateo County Multijurisdictional Local Hazard Mitigation Plan

The San Mateo County 2021 Multijurisdictional LHMP is a large regional and cross-jurisdictional effort to plan for the reduction of risk from natural and man-made disasters. The LHMP assesses hazard vulnerabilities and identifies mitigation actions that jurisdictions will pursue in order to reduce the level of injury, property damage, and community disruption that might otherwise result from such events. The LHMP addresses natural and human-caused hazards, including flooding, drought, wildfire, landslides, severe weather, terrorism, cyber threats, pandemic, and the impact of climate change on hazards, as well as other hazards.[11]

San Mateo County Emergency Operations Plan

The San Mateo County Emergency Operations Plan (EOP) establishes policies and procedures and assigns responsibilities to ensure the effective management of emergency operations within the San Mateo County Operational Area. It provides information on the County emergency management structure of how and when the Emergency Operations Center (EOC) staff is activated. The overall objective of emergency management is to ensure the effective coordination of response forces and resources in preparing for and responding to situations associated with natural disasters, technological incidents, and national security emergencies.[12]

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[11] San Mateo County. 2021. San Mateo County Multijurisdictional Local Hazard Mitigation Plan. Website: https://cmo.smcgov.org/multijurisdictional-local-hazard-mitigation-plan. Accessed February 1, 2022.

[12] San Mateo County Sheriff's Office. 2015. San Mateo Emergency Operations Plan. Website: https://hsd.smcsheriff.com/sites/default/files/downloadables/1%20-%20Emergency%20Operations%20Plan.pdf. Accessed February 1, 2022.

San Mateo–Santa Cruz County Community Wildfire Protection Plan

The purpose of the San Mateo–Santa Cruz County CWPP is to identify the risks and hazards associated with wildland fires in the wildland urban interface (WUI) areas of San Mateo and Santa Cruz counties. The CWPP also identifies recommendations aimed at preventing and reducing both infrastructure and ecosystem damage associated with wildland fires. The CWPP documents suggested actions intended to reduce the risk to people, property, and the environment. One of the goals of the CWPP is to prioritize fuel reduction projects for the various planning areas within San Mateo, including North Coastal, Bayside, Central Coastal, Interior, and South. Another goal of the CWPP is to reduce the risk of structural ignition within both counties.[13]

Local

South San Francisco General Plan Update

The General Plan Update includes the following relevant policies and actions that assist in reducing or avoiding potential impacts related to wildfire hazards:

Community Resilience Element

Policy CR-1.2 Participate in regional hazard planning initiatives. Participate in collaborative hazard planning and preparedness work.

Policy CR-1.3 Mainstream municipal climate preparedness planning and assessment. Implement climate preparedness planning across City departments, programs, and operations.

Action CR-1.3.1 Participate in the Countywide Hazard Mitigation Plan. Actively participate in the San Mateo County Hazard Mitigation Plan maintenance protocols and Countywide initiatives. Adopt the Hazard Mitigation Plan by reference upon update. Update emergency operations plans and protocols to account for regularly updated hazard information.

Action CR-1.3.3 Require multi-hazard real estate disclosure. Enact an ordinance to require real estate disclosures of all hazards identified in the Hazard Mitigation Plan, including hazards associated with anticipatory sea level rise and flooding, geologic hazards, groundwater inundation, or wildfire for commercial and residential properties, including ownership and rental.

Policy CR-1.4 Develop and maintain resilient infrastructure standards. Periodically adjust infrastructure design standards to address asset-specific vulnerabilities associated with the hazards.

Policy CR-1.5 Require capital projects in high hazard areas to adhere to risk assessment guidance. As part of the capital planning and budgeting process, require all

[13] California Department of Forestry and Fire Protection (CAL FIRE), San Mateo – Santa Cruz Unit. 2018. San Mateo – Santa Cruz County Community Wildfire Protection Plan. Website: http://www.sanmateorcd.org/wp-content/uploads/2018/11/2018_CWPP_update_final-Opt.pdf. Accessed February 22, 2022.

projects located within high hazard areas and sea level rise inundation zones to adhere to risk assessment guidance and identify appropriate resilience strategies.

Policy CR-1.6 Continually strengthen emergency management and operations. Continually strengthen emergency management capacity and coordination with the San Mateo County Emergency Operations Center.

Action CR-1.6.5 Maintain evacuation route plans. Maintain and communicate evacuation route plans for businesses and residents.

Policy CR-1.7 Expand Community Emergency Response Team. Continue expanding the reach of the Community Emergency Response Team program to strengthen community cohesion and emergency preparedness through community engagement efforts.

Policy CR-1.8 Enhance post-disaster recovery planning. Ensure the City is ready for post-disaster recovery through proactive planning.

Policy CR-5.1 Implement Sign Hill wildfire mitigation measures. Continue to implement Sign Hill wildfire mitigation measures (i.e., restoration and maintenance of native grass and scrubland habitat, removal of non-native trees and trees killed in October 2020 fire, removal of dead trees due to drought and disease and maintenance of existing trails to function as fire breaks).

Policy CR-5.2 Maintain a comprehensive fire management program. Maintain a comprehensive fire hazard management program to reduce fire hazards on other public lands.

Policy CR-5.3 Expand access to evacuation and early warning technology for wildfire. Increase community participation and understanding of evacuation and early warning software programs to minimize threat to life and be better prepared in case of a wildfire event.

Policy CR-5.4 Maintain adequate emergency response resources. Continue to train and coordinate emergency response to wildfire emergencies with neighboring fire agencies and State wildfire resources. Continue to acquire and maintain adequate vehicles and equipment to respond to wildfire incidents throughout the City.

Sub-Areas Element

Policy SA-32.8 Limit development and excessive grading on the north side of Sign Hill. Limit the amount of development allowed on the north side of Sign Hill (discretionary at one unit per acre maximum). Do not permit excessive grading of this portion of the hill or clustering of development in the future.

City of South San Francisco Climate Action Plan

The Climate Action Plan includes the following actions that assist in reducing or avoiding impacts related to wildfire:

Action WW 1.1 Landscaping Water Requirements. Achieve greater water use reductions than WELO by requiring all landscapes obtain a landscape permit, decreasing the size threshold to capture all landscape renovations, adding prescriptive irrigation plant lists, or water budget requirements.

Action WW 1.4 Landscaping Plant List. Develop a plant list, landscaping palette for efficiency and habitat/wildlife for new development and landscape retrofits.

Action CS 3.1 Colma Creek Restoration. Enhance Colma Creek as an ecological corridor, restoring 5 miles of creek ecologies and creating transitional habitat zones to build resilience and ecosystem services. Protect and expand existing marsh and wetland habitat to improve water quality, adapt to climate change, and provide habitat for wildlife.

City of South San Francisco Municipal Code

Chapter 15.08 California Building Standards Code

Chapter 15.08 of the Municipal Code implements the CBC on a local level.

Chapter 15.18 Dangerous Buildings Code

Chapter 15.18 of the Municipal Code implements the Uniform Code for the Abatement of Dangerous Buildings, 1997 edition, on a local level.

Chapter 15.24 California Fire Code

Chapter 15.24 of the Municipal Code implements the California Fire Code on a local level.

Chapter 13.28 Weed Abatement

Chapter 13.28.130 of the Municipal Code requires the owner or occupant of property abutting a parkway to be responsible for the maintenance of such parkway, including, but not limited to, periodic and regular watering and weed control.

City of South San Francisco Zoning Ordinance

The following revised chapter of the South San Francisco Zoning Ordinance assists in reducing or avoiding impacts related to wildfire.

Chapter 20.300 Lot and Development Standards (revised)

Section 20.300.007 (Landscaping) (revised) includes a number of requirements for new construction or rehabilitated landscapes, including the submittal of a Standard Landscape Plan for projects in fire-prone areas. The Standard Landscape Plan is required to include a landscape design plan in accordance with Section 492.6 of the Model Water Efficient Landscape Ordinance (MWELO). In particular, a landscape design plan for projects in fire-prone areas shall address fire safety and prevention, include a defensible space or zone around a building or structure per Public Resources Code Section 4291(a) and (b), and avoid fire-prone plant materials and highly flammable mulches.

3.16.4 - Methodology

This evaluation focuses on whether the proposed project would result in changes to the physical environment that would cause or exacerbate adverse effects related to wildfires or whether the proposed project (collectively, the General Plan Update, Zoning Code Amendments, and Climate Action Plan) would be placed in a location susceptible to wildfire or post-wildfire conditions. The evaluation also includes a determination of whether changes to the physical environment caused by the proposed project would impair or interfere with emergency response plans, expose people to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire, expose people/structures to downslope flooding or landslides, or include installation or maintenance of infrastructure that may exacerbate fire risk. The following analysis is based, in part, on information provided by the General Plan Update and CAL FIRE website.

3.16.5 - Thresholds of Significance

According to the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist, to determine whether wildfire impacts would be considered significant from implementation of the proposed project, the following questions are analyzed and evaluated. If located in or near SRAs or lands classified as very high fire hazard severity zones, would the project:

a) Expose people or structures, either directly or indirectly to a significant risk of loss, injury, or death involving wildland fires?

b) Substantially impair an adopted emergency response plan or emergency evacuation plan?

c) 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?

d) 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?

e) 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?

3.16.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the proposed project and provides mitigation measures where necessary.

Wildland Fires

Impact WILD-1:	**The proposed project would not expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires.**

The Planning Area is not located in an FHSZ in an SRA or a VHFHSZ in a local, State, or federal responsibility area (Exhibit 3.16-1). As such, the proposed project does not approve, propose, or authorize development in an SRA or FHSZ. The Planning Area is adjacent to land identified as

Moderate FHSZ within an SRA and High FHSZ within an SRA (San Bruno Mountain State Park). While there are no Very High, High or Moderate FHSZs within the city limits, Sign Hill Park is susceptible to wildfires as evidenced by a fire that occurred in 2020. To reduce the threat of wildfire, to date the City has removed 1,500 trees, reducing fire hazards near trails, reducing the available fuel load, and creating defensible space between private parcels and city-owned land. Additional defensible space will be created as existing groves of trees are thinned in order to meet CAL FIRE standards. Brush and weed abatement will also occur regularly to maintain these defensible spaces.[14] The City's weed abatement program is designed to reduce and prevent wildfires and the spread of wildfires. Additionally, for properties that adjoin hillsides, and/or other non-developed open space fire-prone areas, new construction or rehabilitated landscapes require the submittal of a Standard Landscape Plan in accordance with Section 20.300.007 (Landscaping) (revised) of the South San Francisco Zoning Ordinance. The Standard Landscape Plan is required to include a landscape design plan in accordance with Section 492.6 of the Model Water Efficient Landscape Ordinance (MWELO). In particular, a landscape design plan for projects in fire-prone areas shall address fire safety and prevention, include a defensible space or zone around a building or structure per Public Resources Code Section 4291(a) and (b), and avoid fire-prone plant materials and highly flammable mulches.

Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area, although a majority of the Planning Area is urban, some development could occur in areas adjacent to San Bruno Mountain State Park or Sign Hill Park. Additionally, the proposed project may result in other private and public improvements throughout the City that have the potential for environmental effects related to wildland fire hazards should they be constructed near Sign Hill Park or San Bruno Mountain State Park (see Chapter 2, Project Description, Sections 2.5.2, 2.5.5, and 2.5.6). As such, development under the proposed project could expose people or structures, either directly or indirectly, to a risk of loss, injury, or death involving wildland fires. However, it should be noted that land use designations in the City in the vicinity of San Bruno Mountain State Park and Sign Hill Park are not being modified under the proposed project (Exhibit 2-5). As a result, the degree of exposure of people or structures, either directly or indirectly, to a risk of loss, injury, or death involving wildland fires would not substantially change with adoption of the proposed project, and current hazards would not be significantly increased.

The City of South San Francisco, San Mateo County, and SSFFD have plans, policies, actions, and ordinances in place to reduce the risks associated with wildland fires as described below. In addition, future discretionary projects facilitated by the proposed project will be evaluated for project-specific impacts at the time they are proposed.

The San Mateo–Santa Cruz County CWPP, adopted in 2018, identifies recommendations aimed at preventing and reducing both infrastructure and ecosystem damage associated with wildland fires. The City of South San Francisco is located within the San Mateo Bayside Planning Area and adjacent to the San Mateo Interior Planning Area of the CWPP. The portions of the San Mateo Interior Planning Area, adjacent to South San Francisco, are not classified as WUI. The WUI in the San Mateo

[14] Everything South City. 2021. Sign Hill Fire One-Year Anniversary – Recovery Work Continues. Website: https://everythingsouthcity.com/2021/10/sign-hill-fire-one-year-anniversary-recovery-work-continues/. Accessed May 23, 2022.

Bayside area is limited to San Bruno Mountain and some of the land within 2 miles of I-280. According to the CWPP, there are no documented major wildfires in the San Mateo Bayside Planning Area other than on San Bruno Mountain. As stated in the CWPP, San Bruno Mountain has a history of six wildfires larger than 100 acres since 1962, the most recent in 2008. The following general recommendations have been identified for the San Mateo Bayside Planning Area, which would assist in reducing wildfire risk within the City of South San Francisco:[15]

- Reduce fuel in the roadside right-of-way.
- Place fuel breaks strategically (including shaded fuel breaks).
- Establish proper mapping and identification of road systems.
- Plan for structure and infrastructure protection.
- Maintain vegetation clearance around communication facilities (e.g., cellular towers), power lines, and water infrastructure.
- Maintain access to and availability of adequate amounts of water to suppress wildland fires.
- Remove eucalyptus and acacia because of their invasive nature and proclivity to burn rapidly and violently.

The San Mateo County LHMP dedicates a subsection to wildfire, including the secondary effects such as increased flooding or landslides. The LHMP identifies the following to assist the County in reducing wildfire risk, which in turn can assist in reducing wildfire risk within the City of South San Francisco:[16]

- Public education and outreach to people living in or near the fire hazard zones should include information about and assistance with mitigation actions such as defensible space and advance identification of evacuation routes and safe zones.
- Future growth into WUI areas should continue to be managed.
- Area fire districts need to continue to train on WUI events.
- Vegetation management activities should include enhancement through expansion of the target areas as well as additional resources.

The San Mateo County EOP establishes policies and procedures and assigns responsibilities to ensure the effective management of emergency operations within the San Mateo County Operational Area. The overall objective of emergency management is to ensure the effective coordination of response forces and resources in preparing for and responding to situations associated with natural disasters,

[15] California Department of Forestry and Fire Protection (CAL FIRE), San Mateo – Santa Cruz Unit. 2018. San Mateo – Santa Cruz County Community Wildfire Protection Plan. Website: http://www.sanmateorcd.org/wp-content/uploads/2018/11/2018_CWPP_update_final-Opt.pdf. Accessed February 22, 2022.

[16] San Mateo County. 2021. San Mateo County Multijurisdictional Local Hazard Mitigation Plan. Website: https://cmo.smcgov.org/multijurisdictional-local-hazard-mitigation-plan. Accessed February 1, 2022.

such as wildfires. During an emergency or disaster, such as a wildfire, the San Mateo County EOP will accomplish the following:[17]

- Maintain overall coordination/support of emergency response and recovery operations, including on scene incident management as required.
- Coordinate and liaise with appropriate federal, State, and other local government agencies, as well as applicable segments of private sector entities and volunteer agencies.
- Establish priorities and resolve conflicting demands for support.
- Prepare and disseminate emergency public information to alert, warn, and inform the public.
- Disseminate damage information and other essential data.

The SSFFD, Division of Fire Prevention, reviews architectural and development plans to ensure that new development projects meet fire protection and emergency access requirements in accordance with Chapter 15.24 of the Municipal Code, which implements the California Fire Code on a local level. For example, buildings and structures located adjacent to fire hazard areas (San Bruno Mountain State Park and Sign Hill Park), would be required to maintain the required hazardous vegetation and fuel management as well as defensible space as outlined in Government Code Sections 51175-51189 and local standards of the City of South San Francisco. The City requires cutting native brush and native vegetation and removing the dried, cut grass a distance of at least 30-feet or to property line from any structure. For areas of increased vegetation, slope, or aspect the defensible space requirement increases. The City enforces these standards through code enforcement and has established an on-line procedure for identifying possible code violations.[18] In addition, the SSFFD will review plans to ensure that fire sprinklers, fire alarms, and fire extinguishers are up to current code and appropriately located within proposed buildings or structures.

The General Plan Update contains policies and actions that reduce risks from wildland fires before development occurs. Specifically, Policy SA-32.8 requires the City to limit the amount of development allowed on the north side of Sign Hill (discretionary at one unit per acre maximum) and not permit excessive grading of this portion of the hill or clustering of development in the future. Policy CR-5.1 requires the City to continue to implement Sign Hill wildfire mitigation measures (i.e., restoration and maintenance of native grass and scrubland habitat, removal of non-native trees and trees killed in October 2020 fire, removal of dead trees due to drought and disease and maintenance of existing trails to function as fire breaks). Policy CR-5.2 requires the City to maintain a comprehensive fire hazard management program to reduce fire hazards on other public lands. Policy CR-1.2 requires the City to participate in regional hazard planning initiatives. Action CR-1.3.3 requires the City to enact an ordinance to require real estate disclosures of all hazards identified in the Hazard Mitigation Plan, including hazards associated with wildfire for commercial and residential properties, including ownership and rental. Policy CR-1.4 requires the City to periodically adjust

[17] San Mateo County Sheriff's Office. 2015. San Mateo Emergency Operations Plan. Website: https://hsd.smcsheriff.com/sites/default/files/downloadables/1%20-%20Emergency%20Operations%20Plan.pdf. Accessed February 1, 2022.

[18] City of South San Francisco. 2022. Submit a Request. Website: https://www.ssf.net/departments/public-works/submit-a-request. Accessed May 26, 2022.

infrastructure design standards to address asset-specific vulnerabilities associated with the hazards, such as wildfire. Policy CR-1.5 requires that capital projects in high hazard areas adhere to risk assessment guidance and identify appropriate resilience strategies.

As a changing climate combined with combined with human-caused factors (e.g., ignitions, development at the wildland-urban interface, wildfire suppression activities, and infrastructure) has already contributed to more frequent and severe forest wildfires in the western U.S. as a whole,[19] implementation of the Climate Action Plan in and of itself would indirectly reduce wildfire risks. In particular, though, implementation of Action CS 3.1 which would enhance Colma Creek as an ecological corridor and expand existing marsh and wetland habitat, would assist in providing a fuel break in the event of a wildland fire. Implementation of Action WW 1.4, which would develop a landscaping plant list for efficiency and habitat/wildlife for new development and landscape retrofits, could include plants that are more resistant to wildland fires.

As the City receives development applications for subsequent development under the proposed project, those applications will be reviewed by the City of South San Francisco for compliance with the policies and actions of the General Plan Update to reduce the exposure of people or structures, either directly or indirectly, to a risk of loss, injury, or death involving wildland fires. In addition, the City's Municipal Code, which implements the City's General Plan would be reviewed when development applications are received, including Chapter 15.08, California Building Code; Chapter 15.18, Dangerous Buildings Code; and Chapter 15.24, California Fire Code.

In conclusion, development envisioned by the proposed project is generally focused in already developed areas of the City; however, development could result in an incremental increase in exposure of people and structures to wildland fires and associated hazards within the Planning Area. Accordingly, future projects would be required to comply with fire protection measures in the policies and actions within the General Plan Update and the South San Francisco Municipal Code. Further, continued implementation of the San Mateo – Santa Cruz County CWPP, San Mateo County LHMP, San Mateo County EOP, and review of architectural and development plans by the SSFFD, Division of Fire Prevention, will assist in protecting life and property in the event of a wildfire. Additionally, implementation of the General Plan Update policies and actions identified above reduces potential impacts related to exposure to wildland fires and associated hazards to below a level of significance. No additional mitigation is required. Therefore, impacts related to exposure of people and structures to wildland fires and associated hazards, either directly or indirectly, would be less than significant.

Level of Significance

Less than significant impact.

[19] California Energy Commission (CEC). 2018. Statewide Summary Report. California's Climate Change Assessment. Publication number: SUM-CCCA4-2018-013.Website: https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf . Accessed May 26, 2022.

Emergency Response/Evacuation Plan Consistency

Impact WILD-2: The proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan.

The Planning Area is not located in an FHSZ in an SRA or a VHFHSZ in a local, State, or federal responsibility area (Exhibit 3.16-1). As such, the proposed project does not approve, propose, or authorize development in an SRA or FHSZ. The Planning Area is adjacent to land identified as Moderate FHSZ within an SRA and High FHSZ within an SRA (San Bruno Mountain State Park). While there are no Very High, High or Moderate FHSZs within the city limits, Sign Hill Park is susceptible to wildfires as evidenced by a fire that occurred in 2020. Development under the proposed project would result in additional residential and nonresidential development throughout the Planning Area, some of which could occur in areas adjacent to San Bruno Mountain State Park or Sign Hill Park. Additionally, the proposed project may result in other private and public improvements throughout the City that have the potential for environmental effects related to wildfire should they be constructed near Sign Hill Park or San Bruno Mountain State Park (see Chapter 2, Project Description, Section 2.5.2). Therefore, subsequent development under the proposed project could affect adopted emergency response plans or emergency evacuation plans.

Because South San Francisco is a fully built city, new development would primarily occur on parcels that contain existing homes or businesses that are designed to include and maintain defensible space. As most of the development under the proposed project would occur as redevelopment within the urbanized areas of the City, outside of an SRA, the proposed project would not materially overburden any designated evacuation routes nor substantially impair any emergency response plans or emergency evacuation plans.

Development proposed within the northern portions of the Sunshine Gardens, Sign Hill, Paradise Valley/Terrabay, and East of 101 sub-areas could be within 100 feet of land designated as Moderate FHSZ within an SRA or High FHSZ within an SRA. Development authorized by the proposed project, including potential development closest to the SRA (within 100 feet) would not impair an adopted emergency response plan or emergency evacuation plan because policies and actions contained with the General Plan Update establish requirements for preventive measures and practices to minimize wildland fire hazards and maintain adequate evacuation and access routes for vehicles in the event of an emergency, including wildland fires. Policy CR-1.6 requires the City to strengthen emergency management capacity and coordination with the San Mateo County EOC. Action CR-1.6.5 requires the City to maintain and communicate evacuation route plans for businesses and residents. Policy CR-1.7 requires the City to expand the reach of the CERT program to strengthen community cohesion and emergency preparedness through community engagement efforts. Policy CR-5.1 requires the City to implement Sign Hill wildfire mitigation measures and Policy CR-5.2 requires the City to maintain a comprehensive fire hazard management program to reduce fire hazards on other public lands. Lastly, Policy CR-5.3 requires the City to increase community participation and understanding of evacuation and early warning software programs to minimize threat to life and be better prepared in case of a wildfire event.

In the event of an evacuation, major freeways including Interstate 280 (I-280) and U.S. Highway 101 (US-101) can be used. If major freeways are not available, alternative emergency evacuation routes include SR-82, Sister Cities Boulevard, Junipero Serra Boulevard, and East Grand Avenue. Minor Arterials that could be used for emergency evacuation include Mission Road and Orange Avenue.[20] Evacuation routes are communicated to residents and employers via a two-step process. First, residents and employers are asked to opt into SMC Alert-San Mateo County's Alert System (www.smcalert.info) to be notified about important emergency information such as evacuation updates. Second, residents and employers are asked to visit ZoneHaven, the City's Community Evacuation Interface (www.zonehaven.com) to search their address and zone, which will provide additional emergency information, including evacuation routes.[21] Evacuation routes in the City are designed to accommodate development at buildout of the proposed project. In addition, the policies and actions in the General Plan Update are designed to facilitate and support the City's emergency response and do not have any direct or indirect impact on the environment. Additional discussion regarding the City's evacuation plan and procedures is found in Section 3.8, Hazards and Hazardous Materials.

Additionally, all development in the City will be required to demonstrate compliance with applicable codes and regulations. Development under the proposed project would require continued implementation of the San Mateo County LHMP and San Mateo County EOP. Further, the California Fire Code establishes requirements for emergency access for fire apparatus. Examples include requirements for multiple points for access for certain types of development, minimum street widths, and maximum acceptable grades for new roads. Chapter 15.24 of the Municipal Code requires development to demonstrate compliance with applicable fire safety measures prior to the issuance of building permits. Ongoing compliance with safety measures such as weed abatement and defensible space requirements, are enforceable through the City's code enforcement. As such, new development projects that occur pursuant to the proposed project would be assessed for compliance with applicable Fire Code requirements that pertain to emergency access as well as compliance with proposed policies and actions of the General Plan Update which would further enhance emergency response. By involving the Police and Fire Departments in the development review process, the City ensures adequate emergency vehicle access and ensures that development is designed and operated in a manner that minimizes fire hazards and maximizes the potential for responsive emergency services.

Accordingly, compliance with the CBC and General Plan Update policies and actions, as well as review of all new structures by the Police and Fire Departments to ensure adequate emergency access, would ensure that impacts remain less than significant.

Level of Significance

Less than significant impact.

[20] County of San Mateo Office of Emergency Services and Homeland Security. 2015. San Mateo County Emergency Operations Plan. Website: https://hsd.smcsheriff.com/sites/default/files/downloadables/1%20-%20Emergency%20Operations%20Plan.pdf. Accessed February 9, 2022.

[21] Anderson, Kenneth. Emergency Services Manager, City of South San Francisco Fire Department (SSFFD). Personal communication: email. June 8, 2022.

Expose Project Occupants to Pollutant Concentrations from Wildfire

Impact WILD-3: The proposed project would not, 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.

There are no SRAs or Fire Hazard Severity Zones within the Planning Area (Exhibit 3.16-1). However, Sign Hill Park is susceptible to wildfires and the Planning Area is adjacent to land identified as Moderate FHSZ within an SRA and High FHSZ within an SRA (San Bruno Mountain State Park).

As described under Impact WILD-1, new development or improvements under the proposed project in areas adjacent to San Bruno Mountain State Park or Sign Hill Park could expose people or structures to wildfire spread. However, land use designations in the vicinity of San Bruno Mountain State Park and Sign Hill Park are not being modified under the proposed project (Exhibit 2-5). Therefore, the degree of wildland fire hazard, including the exposure of future occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire due to slope or prevailing winds, would not substantially change with adoption of the proposed project, and current hazards would not significantly increase.

As shown in Exhibit 2-5, new development would primarily occur on parcels that already contain some existing homes or businesses, with the majority of potential growth occurring over 0.25 mile from San Bruno Mountain State Park or Sign Hill Park and within the low-lying portions of the Planning Area (5 to 20 feet above sea level) adjacent to San Francisco Bay, which are less susceptible to wildland fires. If a fire were to occur in the more flat and urbanized areas of the City, the risk of the fire spreading rapidly would be less than in areas with steeper slopes. Nevertheless, smoke from wildfires occurring in remote parts of the State have at times resulted in poor air quality throughout the bay area, as experienced most recently during the 2020 and 2021 fire seasons.

Development under the proposed project would be consistent with the City of South San Francisco, San Mateo County, and SSFFD plans, policies, actions, and ordinances in place to reduce the risks associated with wildland fires. As described under Impacts WILD-1 and WILD-2, these existing plans, policies, actions, and ordinances reduce the potential for exposure to wildland fires through preventive and proactive measures to reduce fuel load, maintain robust communications, ensure access to evacuation routes, and ensure that new development projects meet fire protection and emergency access requirements. Reducing potential for fires to start and mitigating wildfire spread once started reduces exposure to smoke and air pollution. Safely evacuating people affected by wildfires also reduces exposure. Policy CR-6.4, which requires the City to maintain adequate cooling and warming centers that can be used as refuge during excessive heat and cold days, would also provide relief from the potential effects of wildfires on air quality, thus reducing the exposure of residents to pollutants.

Implementation of the General Plan Update policies and actions reduces potentially significant impacts related to wildland fires to less than significant. Moreover, land use designations adjacent to San Bruno Mountain State Park and Sign Hill Park are not being modified under the proposed project. As a result, the degree of wildland fire hazard would not substantially change with adoption

of the proposed project, and current hazards would not be significantly increased. Therefore, impacts under this topic would be less than significant.

Level of Significance

Less than significant impact.

Infrastructure That Exacerbates Fire Risk

Impact WILD-4:	**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.**

There are no SRAs or FHSZs within the Planning Area (Exhibit 3.16-1). Sign Hill Park is susceptible to wildfires and the Planning Area is adjacent to land identified as Moderate FHSZ within an SRA and High FHSZ within an SRA (San Bruno Mountain State Park). However, no development facilitated by the proposed project would be located within an FHSZ.

The majority of development under the proposed project, including other private and public improvements throughout the City (see Chapter 2, Project Description, Section 2.5.2), would occur in urban and developed areas that contain required defensible space, existing roadways, fuel breaks, water sources, power lines, and other utilities. The proper installation and maintenance of fire access roadways, the proper sitting of hydrants, adequate water supply, and proper access to structures are essential in enabling effective emergency response and firefighting operations. Accordingly, the Fire Department will review the installation and maintenance of fire department access roadways, access walkways to and around buildings, and hydrant quantity and placement as required by the CFC and CBC. As discussed under Impacts WILD-1 and WILD-2, compliance with the CBC and General Plan Update policies and actions, as well as review of all new structures as well as private and public improvements by the Police and Fire Departments, would ensure that fire risks are not exacerbated, and impacts remain less than significant.

As discussed in Impact UTIL-1, development consistent with the proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. Further, most development under the proposed project is expected to occur in urbanized and developed areas where existing infrastructure (including highways and roadways) are already in place. The proposed project would retain the existing roadway patterns and does not propose any new roadways. As the City receives development applications for subsequent development under the proposed project, those applications, as well as private and public improvements, will be reviewed by the City of South San Francisco for compliance with the fire protection measures identified in the General Plan Update, California Fire Code, and the California Public Resources Code. As such, the proposed project does not propose the installation and maintenance of any new infrastructure that would substantially exacerbate fire risk, and impacts would be less than significant.

Level of Significance

Less than significant impact.

Flooding and Landslide Hazards Due To Post-fire Slope Instability/Drainage Changes

Impact WILD-5: 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.

There are no SRAs or FHSZs within the Planning Area (Exhibit 3.16-1). Sign Hill Park and San Bruno Mountain State Park contain sloping hillsides that are susceptible to landslides and flooding after fire has removed protective vegetative cover. These secondary hazards associated with wildfires are described in the San Mateo County LHMP. In a post-fire scenario, wildfires can secondarily cause contamination of reservoirs, as well as transmission line and road destruction. Slopes that have been stripped of vegetation are exposed to greater amounts of erosive runoff, which can weaken soils and cause slope failure. Major landslides can occur several years after a wildfire. Most wildfires burn hot and for long durations and can bake soils, especially those high in clay content, thus increasing ground imperviousness and runoff generated by storm events, thereby increasing the chance of flooding.

As described under Impact WILD-1, new development or improvements under the proposed project in areas adjacent to San Bruno Mountain State Park or Sign Hill Park could expose people or structures to wildfire spread. However, land use designations in the vicinity of San Bruno Mountain State Park and Sign Hill Park are not being modified under the proposed project (Exhibit 2-5). Therefore, the degree of wildland fire hazard, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes, would not substantially change with adoption of the proposed project, and current hazards would not significantly increase.

As shown in Chapter 2, Project Description, Exhibit 2-5, new development would primarily occur on parcels that already contain some existing homes or businesses, with the majority of potential growth occurring over 0.25 mile from San Bruno Mountain State Park or Sign Hill Park and within the low-lying portions of the Planning Area (5 to 20 feet above sea level) adjacent to San Francisco Bay. If a fire were to occur in the flatter areas of the City, the risk of flooding or landslides afterward would be negligible because of the nearly flat topography and because little soil would be exposed due to the developed conditions. As described in Section 3.6, Geology, Soils, and Seismicity, and Section 3.9, Hydrology and Water Quality, development under the proposed project would be subject to the rules and regulations of the South San Francisco Municipal Code and the policies and actions in the General Plan Update regarding development on unstable geologic soils and controlling stormwater runoff during and after construction. Specific policies related to the prevention of flooding, landslides, and drainage changes include Policy CR-4.3, which discourages development on steep hillside areas more than 30 percent grade; Policy ES-3.3, which requires no net new impervious surfaces in the areas surrounding Colma Creek; Policy ES-7.3, which requires stormwater management practices for new and redevelopment projects; and Policy ES-7.4, which encourages pervious surfaces in new developments. Combined with the continued implementation of the San

Mateo–Santa Cruz County CWPP and San Mateo County LHMP, as well as review of architectural and development plans by the SSFFD, described in Impact WILD-1, these policies provide additional proactive measures to refine and enhance the resiliency of the City, as well as strengthening the City's review of new applications for development to ensure that potential exposure to secondary wildland fire hazards are not exacerbated.

In conclusion, the Planning Area does not contain any FHSZs or contemplate any land use changes in areas adjacent to FHSZs and, therefore, the risk of the proposed project exacerbating post-fire slope instability and drainage changes resulting in landslides or flooding is low. However, any new development facilitated by the proposed project would be subject to General Plan Update policies and actions as well as other local regulations that reduce flood and landslide risks. As such, impacts would be less than significant.

Level of Significance

Less than significant impact.

3.16.7 - Cumulative Impacts

The geographic scope of the cumulative impact analysis for wildfire is the South San Francisco Planning Area as well as the surrounding cities of Brisbane, Daly City, Pacifica, San Bruno, and Millbrae. This analysis evaluates whether the impacts of the proposed project, together with the impacts of cumulative development, would result in a cumulatively significant impact related to wildfire. This analysis then considers whether incremental contribution to cumulative impacts associated with the implementation of the proposed project would be significant. Both conditions must apply for a project's cumulative effects to rise to a level of significance.

Similar to the Planning Area, the surrounding cities are largely urbanized, generally outside the SRA and VHFHSZs and include roads and other fuel breaks, emergency water sources, emergency utilities and maintenance of other infrastructure that would reduce impacts from wildfires. All cumulative projects, including the installation and/or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities), would be subject to similar fire protection development standards and be required to comply with San Mateo County ordinances, General Plan policies, and plan review by the local fire department to assist in protecting life and property in the event of a wildfire. Development projects, including the installation and maintenance of associated infrastructure, within a hazardous fire area must be reviewed by the County Fire Warden to ensure that building materials, access, vegetative clearance from structures, fire flows and water supplies are adequate for fire protection purposes and in conformance to the fire policies of the San Mateo County General Plan. Additionally, development projects, including the installation and maintenance of associated infrastructure, would be required to comply with all policies in the California Fire Code, including the requirements for WUI fire areas. Lastly, all cumulative projects, including the installation and maintenance of associated infrastructure, would be covered under existing emergency response plans by San Mateo County. Lastly, implementation of the San Mateo–Santa Cruz County CWPP and the San Mateo County LHMP throughout the Planning Area and adjacent areas would reduce cumulative impacts related to wildfire. For these reasons, cumulative projects would not exacerbate wildfire risk or have any significant cumulative

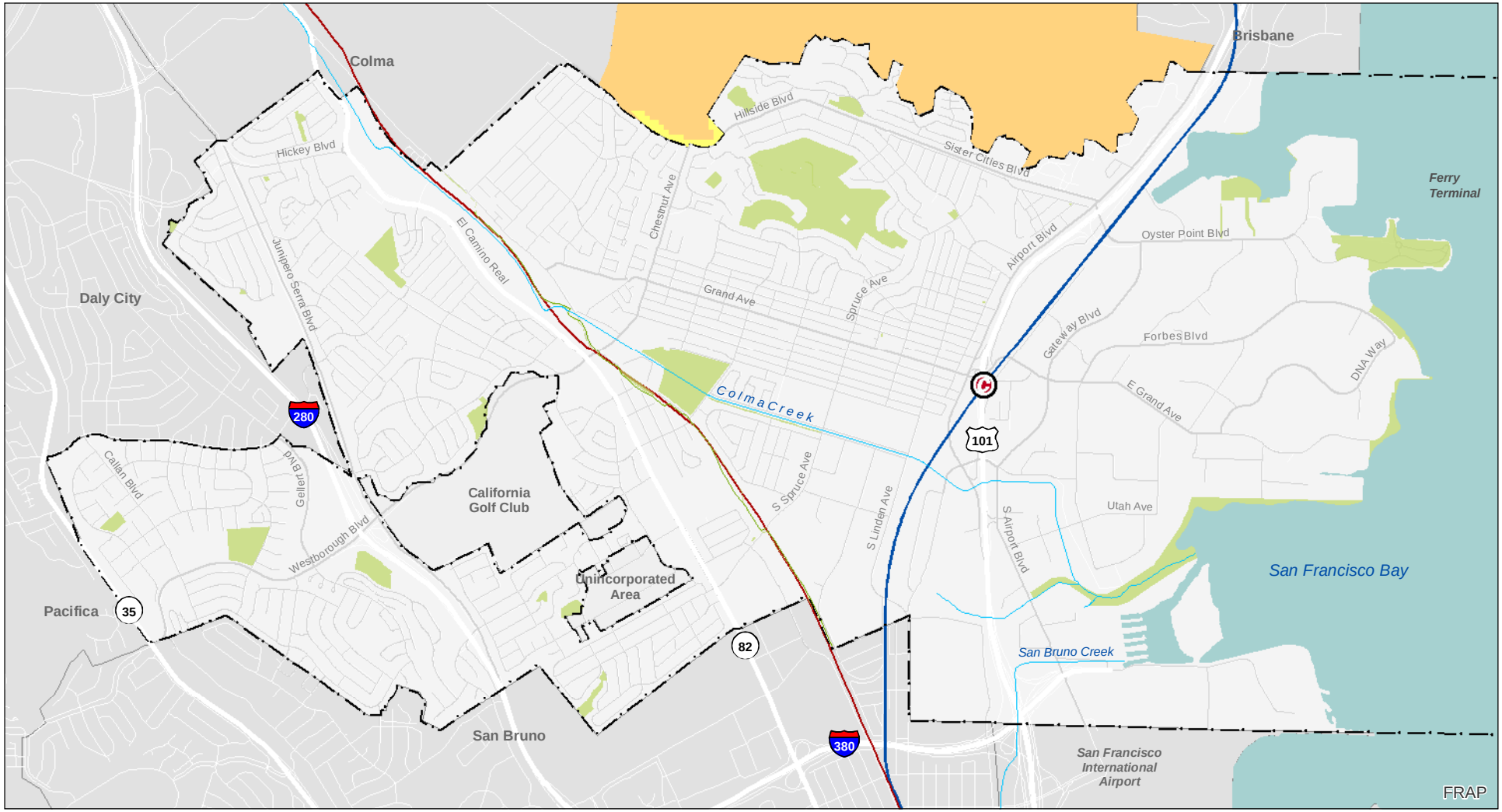
impacts with respect to wildfire hazards. Therefore, cumulative impacts would be less than significant.

The proposed project's incremental contribution to the less than significant cumulative wildfire hazard impacts would not be significant. As previously discussed, because South San Francisco is a fully built City, new development would primarily occur on parcels that already contain some development, with the majority of potential growth occurring over 0.25 mile from San Bruno Mountain State Park or Sign Hill Park and within the low-lying portions of the Planning Area (5 to 20 feet above sea level) adjacent to San Francisco Bay, which are less susceptible to wildland fires. Development could result in an incremental increase in exposure of people and structures to wildland fires and associated hazards, particularly for any development near Sign Hill Park or San Bruno Mountain State Park. However, land use designations in the vicinity of San Bruno Mountain State Park and Sign Hill Park are not being modified under the proposed project (Exhibit 2-5). The adoption of the proposed project would not exacerbate any existing wildfire hazards because the degree of wildland fire hazard, including secondary hazards, would not substantially change with adoption of the proposed project, and current hazards would not significantly increase.

Additionally, new development within the Planning Area would be required to comply with the fire protection measures identified in the General Plan Update, California Fire Code, and the California Public Resources Code. Action CR-1.3.1 directs the City to actively participate in the San Mateo County Hazard Mitigation Plan maintenance protocols and Countywide initiatives. Policy CR-1.6 requires the City to strengthen emergency management capacity and coordination with the San Mateo County EOP. Accordingly, the proposed project's contribution to cumulative impacts would not be cumulatively considerable and would be less than significant.

Level of Cumulative Significance

Less than significant impact.



Source: Raimi + Associates, July 2019. ESRI California Fire Hazard Severity Zones (FHSZ) Data.

Jurisdictional Boundary

- City of South San Francisco
- Other City Boundaries
- Sphere of Influence

Transportation Features

- BART
- Caltrain
- Highway
- Arterial
- Local Street

Wildfire Hazard Severity Zones

- High
- Moderate

FIRSTCARBON SOLUTIONS™

3,000 1,500 0 3,000 Feet

Exhibit 3.16-1
Wildfire Hazard Severity Zones

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CHAPTER 4: ALTERNATIVES TO THE PROPOSED PROJECT

4.1 - Introduction

In accordance with California Environmental Quality Act (CEQA) Guidelines Section 15126.6, this Draft Program Environmental Impact Report (Draft Program EIR) contains a comparative impact assessment of alternatives to the proposed project. The primary purpose of this section is to provide decision-makers and the general public with a number of reasonable project alternatives that could feasibly attain most of the basic project objectives, while avoiding or substantially reducing any of the project's significant adverse environmental effects. Important considerations for these alternatives analyses are noted below (as stated in CEQA Guidelines § 15126.6).

- An EIR need not consider every conceivable alternative to a project;
- An EIR should identify alternatives that were considered by the lead agency, but rejected as infeasible during the scoping process;
- Reasons for rejecting an alternative include:
  - Failure to meet most of the basic project objectives;
  - Infeasibility; or
  - Inability to avoid significant environmental effects.

4.1.1 - Significant Unavoidable Impacts

The proposed project was analyzed for potentially significant impacts related to each of the environmental issues discussed in Sections 3.1 through 3.16. The analysis indicates that the proposed project would result in the significant and unavoidable impacts discussed below. Potentially feasible alternatives were developed with consideration of avoiding or substantially lessening the significant, and potentially significant, adverse impacts of the project, as identified in Chapter 3 of this draft EIR and summarized below. If an environmental issue area analyzed in this draft EIR is not addressed below, it is because no significant impacts were identified for that issue area.

- **Project-Level Vehicle Miles Traveled:** The proposed project's Vehicle Miles Traveled (VMT) would result in a significant impact for citywide Total VMT Per Service Population and for Work-Based VMT Per Employee. The proposed project would implement Mitigation Measure (MM) TRANS-1, which would require the City to implement its Transportation Demand Management (TDM) Ordinance as part of the Zoning Code Amendments and parking requirements to reduce project-generated VMT. MM TRANS-1 also requires the City to update its TDM Ordinance and parking requirements every 5 to 10 years and establish an East of 101 Area Trip Cap, to achieve the maximum feasible reductions in vehicle travel. However, even with the implementation of the General Plan Update policies and actions and implementation of MM TRANS-1, because the effectiveness of VMT reduction strategies cannot be quantified in this programmatic analysis, the City of South San Francisco may not achieve the overall VMT threshold reduction level and the impact would remain significant and unavoidable.

- **Project-Level Roadway Safety:** Implementation of the proposed project would increase vehicle trips on the City's freeway ramps, which would cause vehicle queues to exceed offramp storage capacity or exacerbate offramps that already experience offramp queues exceeding storage capacity, resulting in a potentially significant impact. The proposed project would implement MM TRANS-4, which would require the City to work with the California Department of Transportation (Caltrans) to develop improvement measures for freeway offramps and adjacent intersections that help manage offramp queues to minimize queueing hazards. MM TRANS-1 is also applicable and would be implemented to minimize freeway offramp queues. However, even with the implementation of General Plan Update policies and actions and implementation of MM TRANS-4 and MM TRANS-1, given the uncertainty around specific operational conditions and ability to mitigate such conditions in a constrained right-of-way, this impact remains significant and unavoidable.
- **Cumulative VMT:** Cumulative projects in the nine-county Bay Area may generate new VMT, which would be added to the roadway network within the geographic context. All cumulative projects would be required to comply with County and local ordinances and General Plan policies that address VMT, as well as mitigate their fair share of impacts related to VMT. Nonetheless, the proposed project, in conjunction with other past, present, and future projects, would have a cumulatively significant impact related to VMT. The proposed project would implement MM TRANS-1, which would require the City to implement its TDM Ordinance as part of the Zoning Code Amendments and parking requirements to reduce project-generated VMT. MM TRANS-1 also requires the City to update its TDM Ordinance and parking requirements every 5 to 10 years and establish an East of 101 Area Trip Cap, to achieve the maximum feasible reductions in vehicle travel. However, even with incorporation of MM TRANS-1 which would partially reduce VMT impacts, the impacts would remain significant and unavoidable. As the proposed project's impacts related to VMT are significant and unavoidable, the proposed project's incremental contribution to the cumulative impact is significant and the proposed project's contribution to cumulative VMT impacts would be cumulatively considerable.
- **Cumulative Roadway Safety:** Cumulative projects in the nine-county Bay Area may generate new VMT, which would be added to the roadway network, potentially increasing vehicle trips on the City's freeway ramps, which would cause vehicle queues to exceed offramp storage capacity or exacerbate offramps that already experience offramp queues exceeding storage capacity. All cumulative projects would be required to mitigate for their impacts, as well as ensure that roadway safety is maintained, and comply with applicable policies in local and regional planning documents. Nonetheless, there would remain a cumulatively significant impact related to roadway safety. The proposed project would implement MM TRANS-4, which would require the City to work with Caltrans to develop improvement measures for freeway offramps and adjacent intersections that help manage offramp queues. Implementation of MM TRANS-1 would also assist in minimizing freeway offramp queues. However, even with incorporation of MM TRANS-4 and MM TRANS-1, the impacts would remain significant and unavoidable. As the proposed project's impacts to the City's freeway ramps are significant and unavoidable, the proposed project's incremental contribution to the

cumulative impact is considered significant and the proposed project's contribution to roadway safety cumulative impacts would be cumulatively considerable.

- **Project-Level Conflict with 2017 Bay Area Clean Air Plan:** The VMT growth facilitated by the proposed project would constitute an approximately 94 percent growth through 2040 while population growth facilitated by the proposed project would constitute an approximately 61 percent growth through 2040. The forecasted VMT growth would outpace the forecasted population growth facilitated by the proposed project. Therefore, the proposed project would be considered inconsistent with the 2017 Clean Air Plan. The proposed project would implement MM TRANS-1, which would achieve the maximum feasible reductions in vehicle travel. However, even with the implementation of the General Plan Update policies and actions and implementation of MM TRANS-1, because the effectiveness of VMT reduction strategies cannot be quantified in this programmatic analysis, the City of South San Francisco may not achieve the overall VMT threshold reduction level. As such, this impact would be significant and unavoidable.
- **Project-Level Criteria Air Pollutants:** Because the proposed project's projected VMT growth outpaces projected population growth, the proposed project would result in a cumulatively considerable net increase in criteria pollutants, and this impact would be potentially significant. The proposed project would implement MM TRANS-1, which would achieve the maximum feasible reductions in vehicle travel. However, as there is no reasonable mitigation that could be implemented to increase population projections while keeping VMT growth to a minimum in an area that is already fully urbanized and built out, such as the City of South San Francisco, this impact would remain significant and unavoidable after mitigation.
- **Cumulative Conflict with 2017 Bay Area Clean Air Plan:** Development envisioned by the proposed project would be inconsistent with the 2017 Bay Area Clean Air Plan, since it would facilitate VMT growth which outpaces the forecasted population growth and would therefore result in a cumulatively considerable net increase in criteria air pollutants and ozone precursors, resulting in a conflict with the applicable air quality plan.
- **Cumulative Criteria Air Pollutants:** Because the proposed project would result in a projected VMT growth which outpaces the projected population growth through the planning horizon of 2040, the proposed project would result in a cumulatively considerable net increase in criteria air pollutants and ozone precursors.

4.1.2 - Alternatives to the Proposed Project

Pursuant to CEQA Guidelines Section 15126.6, this Draft Program EIR presents a reasonable range of potentially feasible alternatives to the proposed project for analysis and evaluation of their comparative merits. These alternatives cover a range of development alternatives that would meet most of the basic objectives of the proposed project while substantially lessening one or more of its significant impacts. CEQA Guidelines Section 15126.6(a) states that an EIR need not evaluate every conceivable alternative to a project. Information has been provided for each alternative that would allow meaningful comparison with the proposed project.

The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason. The State CEQA Guidelines require that the EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative must be discussed, but in less detail than the significant effects of the project as proposed (CEQA Guidelines, § 15126.6(d)).

In defining "feasibility", CEQA Guidelines Section 15126.6(f) (1) states, in part:

> Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

Under CEQA Guidelines Section 15126.6(e), "The specific alternative of "no project" shall also be evaluated along with its impact." Where, as here, this alternative means a proposed project would not proceed, the discussion "[s]hould compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved" (CEQA Guidelines § 15126.6(e)(3)(B)). If disapproval would result in predictable actions by others, such as the proposal of some other project, that foreseeable consequence is an appropriate alternative. Where rejecting the proposed project would not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval. A "no project" alternative shall describe existing conditions at the time the Notice of Preparation (NOP) is prepared, as well as what could reasonably be expected in the foreseeable future if the project is not approved, based on current plans and consistent with available infrastructure and community services (CEQA Guidelines § 15126.6(e)(3)(C).) In this section, the "no project" alternative contemplates other foreseeable development that would be approved on-site in accordance with the existing General Plan land use designations. If the no project alternative is the environmentally superior alternative, CEQA requires that the EIR "…shall also identify an environmentally superior alternative among the other alternatives" (CEQA Guidelines, § 15126(e)(2)).

The alternatives to the proposed project analyzed in this section are as follows:

- **Alternative 1–No Project Alternative/1999 General Plan:** Under the No Project Alternative/1999 General Plan, the General Plan would not be updated with new policies and no zoning or land use designation changes would occur. Future development would be in accordance with the current land use and zoning maps identified in the 1999 General Plan. The 1999 General Plan provided for development of then-approved projects plus future

development of a total of 2,780 housing units and 9 million square feet of nonresidential space to the City's current inventory of an estimated 19,400 housing units and 18.1 million square feet of nonresidential development. The 1999 General Plan estimated a population of 67,400 at projected buildout in 2020. Existing land uses in 2019 include 24,647 residential units and 31,906,205 square feet of commercial/industrial/civic space. Exhibit 4-1 illustrates the existing land use map from the 1999 General Plan. Additionally, under this alternative the Zoning Code would not be updated, and the City would not consider updating the existing Climate Action Plan (CAP). Under this alternative, the current goals, policies, and zoning would remain in place through the horizon year.

- **Alternative 2–Decreased Employment Alternative:** Under the Decreased Employment Alternative, there would be a 25 percent decrease in nonresidential uses in the East of 101, Lindenville, and El Camino subareas to decrease the number of employment opportunities and improve the jobs/housing balance in the City. It is assumed that these decreases would not occur within 0.333 mile of existing transit. This alternative was selected because it would decrease VMT associated with employment and would therefore result in reduced traffic related impacts compared to the proposed project.
- **Alternative 3–Increased Residential Alternative:** This alternative would propose an increase in residential development along the El Camino Real transit corridor through increased density zoning (see Exhibit 4-2). This alternative would result in an increase in approximately 500 dwelling units compared to the proposed project. An additional 3,017 residential units would be added to this area (compared to the 2,524 units under the proposed project). Approximately 95 acres of what is now proposed as Medium-Density Mixed Use along El Camino Real and around the Bay Area Rapid Transit (BART) station would be designated as High-Density Mixed Use, resulting in a change in maximum allowable density from 120 dwelling units per acre to 180 dwelling units per acre. Maximum building heights for these parcels would increase from 85 feet to 120 feet. This alternative was selected because it would reduce the jobs to housing imbalance; thereby reducing VMT impacts associated with commuting compared to the proposed project.

Three alternatives to the proposed project are analyzed below. These analyses compare the proposed project and each individual project alternative. In several cases, the description of the impact may be the same under each alternative when compared with the CEQA Thresholds of Significance (i.e., both the project and the alternative would result in a less than significant impact). The actual degree of impact may be slightly different between the proposed project and each alternative, and this relative difference is the basis for a conclusion of greater or lesser impacts.

4.2 - Project Objectives

As stated in Chapter 2, Project Description, the objectives of the proposed project are to:

- Reflect the current goals and vision expressed by South San Francisco residents, businesses, decision-makers, and other stakeholders.

- Address issues and concerns identified by South San Francisco residents, businesses, decision-makers, and other stakeholders.
- Provide affordable, safe, attractive, amenity-rich neighborhoods, balancing housing options with commercial and employment access.
- Ensure that high-quality and accessible services, facilities, and amenities are available for residents at all stages of their lives, such as internet connectivity, parks and open spaces, emergency response services, and educational and recreational opportunities.
- Provide a safe, convenient, and accessible transportation network that is well-connected to the region by ensuring that streets have accessible alternate transportation for all ages and abilities.
- Build a resilient community that is prepared for the future effects of climate change and natural disasters by prioritizing resources for the City's most vulnerable residents and investing in climate pollution reduction, efficient energy and water use, and clean air.
- Foster a prosperous downtown and local economy by supporting local businesses and strengthening the City's role as the worldwide hub of the biotech and life sciences.
- Make the downtown a destination for all by providing a diversity of uses as well as improving walkability, safety, and visual interest.
- Embrace the City's legacy as "The Industrial City" and maintain a core of middle-wage jobs in the City.
- Identify strategies and measures to reduce greenhouse gas (GHG) emissions generated by existing and future uses in the City.
- Update the Zoning Code to reflect the shared vision of the new General Plan and implement its new policies that reflect and preserve community character, respond to economic realities and trends, facilitate reinvestment in the community and development of housing for all segments, and encourage appropriate use of land.
- Address new requirements of State law.

4.3 - Alternative 1—No Project Alternative/1999 General Plan

CEQA Guidelines Section 15126.6(e) requires an EIR to evaluate a 'No Project Alternative,' which is defined as what would be reasonably expected to occur in the foreseeable future, if the project were not approved. Under this alternative, the 1999 General Plan would remain as the comprehensive planning document. Development would occur as allowed under the 1999 General Plan and pursuant to its goals and policies. It is reasonable to expect that the City would develop the South San Francisco Planning Area under the 1999 General Plan under existing land uses if the proposed project is not approved (Chapter 2, Project Description, Exhibit 2-3). Under the No Project Alternative/1999 General Plan, the Zoning Code would not be amended, and the existing CAP would not be updated. Buildout under the No Project Alternative would be less than that proposed under the proposed project. It should be noted that growth as of the 2019 proposed project baseline exceeds past growth projections under the 1999 General Plan. It is reasonable to assume, based on

past population trends, that development under the No Project Alternative would continue to exceed planning calculations in the 1999 General Plan. With the proposed project, the change in anticipated growth would be addressed by updated General Plan policies, goals and implementing actions. Under the No Project Alternative, future growth would not benefit from the new policies in the General Plan Update, including Zoning Code Amendments and CAP, which provide direction for issues of sustainability, climate resiliency and reduction in VMT in a cohesive manner. Therefore, the City would not have in place any overarching policy guidance for how those issues would be consistently addressed over the long term. Development permit applications would continue to be submitted and although the City would comply with all recently enacted applicable legislation, the City would continue to review projects pursuant to 1999 goals and policies. Review under the 1999 General Plan would not incorporate Zoning Code Amendments or the updated 2022 CAP. Table 4-1 compares the existing conditions, growth projections under the 1999 General Plan, and the development that could be accommodated by the proposed project. As shown in Table 4-1, existing development as of 2019 exceeds the growth potential identified in the 1999 General Plan. Under the No Project Alternative/1999 General Plan, it is reasonably foreseeable that development would continue to necessitate site-specific rezoning and General Plan amendment actions, rather than through a comprehensively planned approach.

Table 4-1: Baseline Conditions and Growth Projections Comparison No Project/Proposed Project

	Existing Conditions (2019)	Growth Projections No Project Alternative	Growth Projections Proposed Project (City–Buildout 2040)	Growth Projections San Mateo County (2040)
Population	67,730	67,400	80,015	916,590
Housing Units	22,437	22,180	25,305	317,965
Nonresidential Development	31.9 million square feet	27.1 million square feet	59.0 million square feet	N/A
Jobs	95,260	71,400	54,230	472,045

Notes:
N/A = Not Available
Sources: California Department of Finance, 2012. November; California Department of Finance, 2021. May; City of South San Francisco 1999 General Plan; Association of Bay Area Governments (ABAG). 2017 Projections 2040 by Jurisdiction. Website: http://projections.planbayarea.org/. Accessed May 2, 2022.

4.3.1 - Impact Analysis

Aesthetics, Light, and Glare

As noted in Section 3.1, Aesthetics, Light and Glare, of this Draft Program EIR, the proposed project's impacts to aesthetics, light, and glare would be less than significant or no impact with the implementation of applicable regulations including proposed project policies and implementing actions. No mitigation is necessary.

As shown in Table 4-1, buildout consistent with the No Project Alternative/1999 General Plan would be less than under the proposed project. Therefore, potential impacts from the No Project Alternative/1999 General Plan would be reduced compared to the proposed project but would be similarly less than significant. Proposed policies in the General Plan Update that represent advances over the 1999 General Plan and that would result in net benefits, such as policies related to enhancing and improving land use compatibility guidelines for aesthetics, would not be implemented under this alternative. Additionally, development under this alternative would not result in a cohesive development scheme because it is reasonable to assume that development under the No Project Alternative/1999 General Plan would continue to require site-specific rezoning and General Plan amendments.

Therefore, the No Project Alternative/1999 General Plan would result in less than significant impacts on aesthetics, light, and glare; however, policy and program enhancements would not be implemented under this alternative which could improve the visual quality and character of the City despite increase in development. Therefore, impacts related to aesthetics, light, and glare would be greater under No Project Alternative/1999 General Plan as compared to the proposed project.

Air Quality

As noted in Section 3.2, Air Quality, of this Draft Program EIR, the majority of the proposed project's impacts related to air quality would be less than significant with the implementation of MMs AIR-1a, AIR-1b, TRANS-1 and applicable regulations including proposed project policies and implementing actions. However, because the proposed project’s projected VMT growth outpaces projected population growth, impacts related to a conflict with the 2017 Clean Air Plan and a cumulatively considerable net increase in criteria pollutants would be significant and unavoidable.

The No Project Alternative/1999 General Plan would result in less intense development compared to the proposed project. However, future development, whether under the No Project Alternative or the proposed project, would be inconsistent with the 2017 Bay Area Clean Air Plan because projected VMT growth would outpace projected population growth. However, this alternative would not implement the CAP, which contains policies and implementing actions to reduce air quality impacts. Separate from the CAP, the General Plan Update and Zoning Code Amendments include multiple provisions to ensure compliance with the Air Quality Management Plan (AQMP) and attain air quality standards. These include policies and implementing actions requiring the City to coordinate with regional agencies on regional planning initiatives, to ensure that planning decisions support regional goals of improving air quality. As explained in Section 3.2, Air Quality, these policies and actions would ensure that the plan does not inhibit attainment of air quality standards and would actually assist in improving local and regional air quality. These benefits would not be realized with implementation of the No Project Alternative.

The No Project Alternative would not accommodate additional residential growth in the East of 101 or Lindenville planning sub-areas because residential units are not currently allowed under the existing General Plan. Therefore, the No Project Alternative would not accommodate the same degree of housing as the proposed project. Additionally, the concentration of population, employment, and services would not facilitate mixed-use development to the same degree as the

proposed project, because the No Project Alternative would continue to require project-specific General Plan and Zoning Code amendments. However, similar to the proposed project, under this alternative growth in residential and nonresidential uses would be infill development and would occur within the already developed areas urban areas throughout the City. VMT under the No Project Alternative/1999 General Plan would be less than under the proposed project (4,911,800 compared to 6,585,400), but the No Project Alternative/1999 General Plan would not promote higher-intensity, mixed uses around transit stations and corridors and would not accommodate the level of growth anticipated for the City through 2040. However, as shown in Table 4-3, VMT per capita would be greater under the No Project Alternative/1999 General Plan (27.19, Table 4-3 below) compared to the proposed project (26.80) because of the proposed project's increase in mixed uses compared to the No Project Alternative. It should be noted that VMT under the No Project Alternative/1999 General Plan does not assume full buildout of the 1999 General Plan. Rather, it evaluates 2019 Existing Conditions plus pipeline projects (projects that were approved or under construction).

In the 1999 General Plan EIR, the analysis of air quality impacts to air quality determined that over the long term, development under the 1999 General Plan could lead to emissions of ozone precursors (reactive organic gases [ROG] and nitrogen oxides [NO_X]) and particulate matter, including dust, 10 micrometers or less in diameter (PM_{10}), largely due to increases in VMT. Emissions under the 1999 General Plan would be reduced compared to then-existing conditions for all of the criteria air pollutants (and precursors), except for PM_{10}. Generally, the estimated reduction in emissions indicates that, except for PM_{10}, the increased vehicular activity and energy consumption from new development would be more than offset by projected lower exhaust emissions per vehicle mile traveled at General Plan buildout in 2020. PM_{10} would increase in the future relative to existing conditions because entrained road dust, rather than exhaust emissions, is the principal component of PM_{10} and such emissions would not be affected by reductions in exhaust emissions. The 1999 General Plan EIR determined that the General Plan would be inconsistent with the transportation performance standard that links the rate of increase in VMT with the rate of increase in population. As such, continued implementation of the 1999 General Plan under the No Project Alternative would obstruct implementation of the applicable air quality plan and the impact would be significant and unavoidable.

Air quality impacts under the No Project Alternative/1999 General Plan would be greater under this alternative than the proposed project because the VMT per capita would be greater, and the impact relative to consistency with the regional Clean Air Plan would be significant and unavoidable. Additionally, continued implementation of the No Project Alternative/1999 General Plan would not realize the environmental benefits included in the proposed project's policies and actions. It would not implement MM TRANS-1 which would achieve the maximum feasible reductions in vehicle travel. No Project Alternative/1999 General Plan also assumes that the CAP would not be updated. As a result, the City would not adopt or implement updated strategies or measures to reduce GHG emissions and subsequent criteria pollutant and ozone precursor emissions. None of the emissions reduction strategies, measures, or actions outlined in the updated 2022 CAP would be implemented and none of the GHG benefits and air quality co-benefits identified in the updated 2022 CAP would be realized. Therefore, even though impacts are significant and unavoidable under both the

proposed project and this alternative, continued implementation of the No Project Alternative/1999 General Plan would have a greater impact than the proposed project.

Biological Resources

As noted in Section 3.3, Biological Resources, of this Draft Program EIR, the proposed project's impacts related to biological resources would be less than significant with the implementation of mitigation measures identified herein, along with applicable regulations including proposed project policies and implementing actions.

As shown in Table 4-1, buildout under the No Project Alternative/1999 General Plan would be less than under the proposed project. However, because South San Francisco is a fully built city, new development would primarily occur on parcels that already contain some existing homes or businesses and would result in impacts similar to that of the proposed project. Therefore, potential disturbance to biological resources would be similar. Development under the No Project Alternative/1999 General Plan would comply with mitigation measures specified in the 1999 General Plan EIR that would reduce impacts but would not have the benefit of the enhancements identified in the proposed project. Impacts would be expected to be less than significant, similar to the proposed project.

Cultural Resources and Tribal Cultural Resources

The proposed project's impacts related to cultural resources and tribal cultural resources would be less than significant with the implementation of applicable regulations including new and revised General Plan Update policies and implementing actions. No mitigation is necessary.

As shown in Table 4-1, buildout under the No Project Alternative/1999 General Plan would be less than under the proposed project. However, because South San Francisco is a fully built city, new development would primarily occur on parcels that already contain some existing homes or businesses, and, therefore, potential disturbance to cultural resources and tribal cultural resources would be similar to the proposed project. Protection of tribal cultural resources would be provided by specific policies and programs in the 1999 General Plan related to tribal consultation. Impacts would be less than significant, similar to the proposed project.

Energy

The proposed project's impacts related to energy would be less than significant with the implementation of applicable regulations including new and revised General Plan Update policies and implementing actions. No mitigation is necessary.

The No Project Alternative/1999 General Plan does not expressly authorize any specific construction projects. The land use patterns in the No Project Alternative/1999 General Plan are similar to the land use patterns under the proposed project, except as shown on Exhibit 2-5, with the exception of changes in the proposed project designed to accommodate additional growth in the East of 101, Lindenville, Downtown, and El Camino planning subareas.

The 1999 General Plan EIR identified no significant impacts related to energy and no mitigation was required. However, the No Project Alternative/1999 General Plan would not adopt the updated 2022 CAP. It would not incorporate the local solar installation actions, such as a solar reach code for nonresidential buildings (Action CE 1.1), streamlined photovoltaic system permitting and approval (Action CE 1.3), or explore a community scale solar or other renewable energy implementation (Action CE 1.6) for reducing GHG emissions. It would not provide an additional combination of financial and development process incentives (e.g., expedited permitting, FAR increases) that promote increased energy efficiency of new development to exceed the Title 24 energy efficiency standard (Action BNC 1.1) or adopt an all-electric reach code for nonresidential new construction (Action BNC 2.1). Lastly, this alternative would not include the CAP actions to improve the energy efficiency of existing buildings, such as requiring major renovations to meet California Green Building Standards Code (CALGreen) energy efficiency standards (Action BE 1.2) and implementing retrofits in the existing building stock (Action BE 1.5). The No Project Alternative would not include Zoning Code Amendments that would include measures to promote installation of alternative energy.

Accordingly, the No Project Alternative/1999 General Plan would not address energy impacts to the same degree as the proposed project. Impacts related to energy under the No Project Alternative/1999 General Plan are anticipated to be greater than the proposed project in the absence of the comprehensive goals and policies that comprehensively address sustainable energy policy and future development in the City. However, since existing General Plan policies would remain in place, impacts are assumed to be less than significant. Thus, the No Project Alternative/1999 General Plan would result in greater, though, less than significant impacts, compared to the proposed project.

Geology, Soils, and Seismicity

The proposed project's impacts related to geology, soils, and seismicity would be less than significant with the implementation of applicable regulations including new and revised General Plan Update policies and implementing actions. No mitigation is necessary.

The No Project Alternative/1999 General Plan would introduce less new development than the proposed project. Less development overall would help reduce the risk of damage in the event of an earthquake. All future development would be in a completely developed, urban environment and required to meet seismic safety standards established by State and local government. Compared to the proposed project, the No Project Alternative/1999 General Plan would not focus new development in the East of 101, Lindenville, El Camino, and Downtown subareas but could spread more development throughout the City. The focused subareas are outside the Alquist-Priolo Earthquake Fault Zone, whereas increased development in the western portion of the City would be exposed to risks from fault rupture. The No Project Alternative/1999 General Plan would result in similar less than significant impacts as the proposed project, but they would be somewhat greater because of the non-focused nature of development under the existing General Plan.

Greenhouse Gas Emissions

The proposed project's impacts related to GHG emissions would be less than significant with the implementation of applicable regulations including new and revised General Plan Update and CAP policies and implementing actions. No mitigation is necessary.

While all future development under the No Project Alternative/1999 General Plan would be required to conform to the 2017 Bay Area Clean Air Plan, the No Project Alternative/1999 General Plan would not include an updated CAP that provides guidance, protocols, and control measures to reduce GHG emissions. Absent implementation of the updated 2022 CAP and the associated policy framework, it can be reasonably assumed that the City would not reduce GHG emissions to the same degree as projected under the proposed project. Impacts related to GHG emissions under the No Project Alternative/1999 General Plan are anticipated to be greater than the proposed project in the absence of the comprehensive goals and policies that define the character and visual quality of future development in the City. Thus, the No Project Alternative/1999 General Plan would not provide as extensive benefits for GHG emission reduction as under the proposed project.

Since the No Project Alternative/1999 General Plan would not have the benefit of the policy and program enhancements in the General Plan Update and Zoning Code Amendments or the updated 2022 CAP, although impacts would be less than significant without mitigation, they would not be reduced to the same degree as the proposed project. Therefore, impacts related to GHG emissions would be greater under No Project Alternative/1999 General Plan as compared to the proposed project.

Hazards and Hazardous Materials

The proposed project's impacts related to hazards and hazardous materials would be less than significant with the implementation of applicable regulations including new and revised General Plan Update policies and implementing actions. No mitigation is necessary.

While buildout under the existing General Plan would be less than under the proposed project, due to the urban nature of the Planning Area, development would occur on predominantly the same parcels as proposed under the proposed project, with similar risks of exposure to soils contamination and hazardous materials. However, policy and program enhancements would not be implemented under this alternative. Since the No Project Alternative/1999 General Plan would not have the benefit of the policy and program enhancements, although impacts would be less than significant without mitigation, they would not be reduced to the same degree as the proposed project. Therefore, impacts related to hazards and hazardous materials would be greater under No Project Alternative/1999 General Plan as compared to the proposed project.

Hydrology and Water Quality

The proposed project's impacts related to hydrology and water quality would be less than significant or no impact with the implementation of applicable regulations including General Plan policies and implementing actions. No mitigation is necessary.

Development under the No Project Alternative/1999 General Plan would have the potential to adversely affect hydrology and water quality through the introduction of additionally impermeable surfaces that limit groundwater recharge, increase stormwater flows, and provide a pathway for pollutants to enter surface waters. The existing 1999 General Plan policies and water quality regulations, including existing City planning policies and development standards, would reduce these impacts to below a level of significance.

However, the General Plan Update includes new policies that would further avoid or minimize impacts to hydrology and water quality. The proposed project contains new policies and implementing actions to address flooding due to sea level rise and recommended adaptation strategies for community resilience. These new policies address shoreline protection, ecosystem resilience, flooding prevention, disaster preparedness, increased groundwater quality and quantity, and stormwater management to a greater degree than the existing policies in the 1999 General Plan. Additionally, the updated 2022 CAP includes policies that promote green infrastructure and indirectly promote drought resiliency. The Zoning Code Amendments also include updated policies and development standards that protect hydrology and water quality. Therefore, the No Project Alternative/1999 General Plan would have a greater impact on hydrology and water quality than the proposed project. Because the No Project Alternative/1999 General Plan does not contain these policies and implementing actions, potential hydrology and water quality impacts would be greater under this alternative. Therefore, impacts would be greater under No Project Alternative/1999 General Plan as compared to the proposed project.

Land Use and Planning

The proposed project's impacts related to land use would be less than significant or no impact with the implementation of applicable regulations including new and revised General Plan Update policies and implementing actions. No mitigation is necessary.

Similar land uses would be developed under the No Project Alternative/1999 General Plan, a mix of residential, commercial, industrial, and mixed uses. Because South San Francisco is a fully built city, new development under this alternative would primarily occur on parcels that already contain some existing homes or businesses, similar to the proposed project. Therefore, potential land use impacts would be similar. However, policy and implementing actions would not be implemented under this alternative. For example, the General Plan Update includes policies and actions to ensure that existing housing is appropriately protected, and additional housing is planned. Since the No Project Alternative/1999 General Plan would not have the benefit of the policy and implementing actions, although impacts would be less than significant without mitigation, they would not be reduced to the same degree as the proposed project. Therefore, impacts related to land use and planning would be greater under No Project Alternative/1999 General Plan as compared to the proposed project.

Noise

The proposed project's impacts related to noise would be less than significant with the implementation of mitigation measures and applicable regulations including new and revised General Plan Update policies and implementing actions.

The No Project Alternative/1999 General Plan would retain the existing 1999 General Plan, and development throughout the City would likely continue to exceed planned for growth, necessitating site-specific rezoning and General Plan updates. The City is subject to typical urban noises such as noise generated by traffic and activities consistent with an urban area. Continued development under the 1999 General Plan would result in increased Average Daily Traffic (ADT) compared to the proposed project at several roadway segments, which could generate greater levels of ambient noise. The proposed project includes additional mitigation measures that would reduce impacts related to noise to less than significant with mitigation. This mitigation includes preparation of an operational noise plan for future projects within 300 feet of a sensitive receptor. The General Plan Update also includes policies and implementing actions to reduce noise impacts within the City. Any proposed residential development project or any hotel, motel, or transient lodging land use development project that would be located within the San Francisco International Airport (SFO) 65 A-weighted decibel (dBA) Community Noise Equivalent Level (CNEL) noise contours, shall demonstrate compliance with Policy NOI-1.1 and Policy NOI-1.2 of the City's Noise Element by submitting a final acoustical report prepared to the satisfaction of the Planning Division. The No Project Alternative/1999 General Plan would not have the benefit of these mitigation measures, policies, and implementing actions. Therefore, potential noise impacts would be greater under this alternative as this alternative would not include these new policies or mitigation for noise impacts. As such, the No Project Alternative/1999 General Plan would result in greater noise impacts than the proposed project, although the impacts would be less than significant.

Population, Housing, and Employment

The proposed project's impacts related to population, housing, and employment would be less than significant with the implementation of applicable regulations including new and revised General Plan Update policies and implementing actions. No mitigation is necessary.

Current population in the City exceeds the plan for growth in the 1999 General Plan. Development under the 1999 General Plan would continue to exceed the plan for growth and would require site-specific rezoning and General Plan amendments. Impacts related to housing, population, and employment under the No Project Alternative/1999 General Plan are anticipated to be greater than the project in the absence of the comprehensive goals and policies that comprehensively address anticipated population and employment growth and future housing development in the City. The proposed project would result in a greater number of residential units and greater employment opportunities than the No Project Alternative/1999 General Plan; however, the proposed project would also include policies and plans to protect existing housing and provide a variety of housing options in a cohesive planned manner. In contrast, the No Project Alternative/1999 General Plan would not provide as much housing as the proposed project and would fail to meet the City's Regional Housing Needs Assessment (RHNA) allocation. Therefore, the impact on population, housing, and employment would be greater than under the proposed project, although remaining less than significant.

Public Services and Recreation

The proposed project's impacts related to public services and recreation would be less than significant with the implementation of applicable regulations including new and revised General Plan Update policies and implementing actions. No mitigation is necessary.

The No Project Alternative/1999 General Plan would result in fewer residential units, less nonresidential square footage, and fewer jobs compared to the proposed project. This would result in less demand for public services and recreation than would occur under the proposed project. However, the No Project Alternative/1999 General Plan would not realize the benefits of the policies and implementing actions in the proposed project pertaining to public services and recreation. For example, Policy SA-16.3 facilitates creation of additional parks and open space in the East of 101 subarea. Policy SA-31.2 would improve pedestrian and bicycle connections to the Centennial Way Trail, and to the El Camino Real and Downtown subareas. Since the No Project Alternative/1999 General Plan would not have the benefit of the policy enhancements, although impacts would be less than significant without mitigation, they would not be reduced to the same degree as the proposed project. Therefore, impacts related to public services and recreation would be greater under No Project Alternative/1999 General Plan as compared to the proposed project.

Transportation

The proposed project would result in significant and unavoidable impacts related to increased VMT and freeway queueing. For this reason, this analysis presents a quantified comparison of the No Project Alternative/1999 General Plan and the proposed project. It should be noted that VMT under the No Project Alternative/1999 General Plan does not assume full buildout of the 1999 General Plan. Rather, it evaluates 2019 Existing Conditions plus pipeline projects (projects that were approved or under construction.

The roadway network under the No Project Alternative/1999 General Plan would be very similar to the 2019 Existing Conditions roadway network. No new roadways or major roadway expansions would be built within South San Francisco, although completion of other major transportation projects within San Mateo County is included (including the U.S. Highway 101 [US-101] Express Lanes and Caltrain Business Plan Service Vision). The 2040 No Project scenario is based on Plan Bay Area 2040 forecasts plus land use adjustments to reflect approved and under construction projects in South San Francisco and provides a reasonable estimate of potential impacts under the No Project Alternative.

Table 4-2, below, presents the existing, 2040 No Project, and 2040 Plus Project Total VMT. Table 4-3 presents Total VMT per Service Population, Home-Based VMT per resident, and Work-Based VMT per employee for the same three scenarios.

Total VMT increases under both Existing and 2040 No Project and Existing and 2040 Plus Project. 2040 Plus Project Total VMT is also higher than 2040 No Project VMT. Total Home-Based VMT and total Work-Based VMT follow the same patterns and are highest under 2040 Plus Project. However, South San Francisco's employee population and resident population increases between existing and 2040 No Project conditions; but not to the same degree as under the proposed project.

Table 4-2: VMT and Population Totals in South San Francisco

Analysis Scenario	Total VMT	Home-Based VMT	Work-Based VMT	Service Population	Residents	Employees
Existing	3,387,200	690,600	936,400	123,500	67,200	56,300
2040 No Project	4,911,800	797,300	1,426,300	180,700	84,700	96,000
2040 Plus Project	6,585,400	997,400	1,844,000	245,700	108,100	137,600

Notes:
VMT = Vehicle Miles Traveled
VMT calculations account for all VMT including both light-duty and heavy-duty vehicles.
Source: City/County Associations of Governments San Mateo (C/CAG)-Santa Clara Valley Transportation Authority (VTA) Travel Demand Model.

Table 4-3: Per Capita VMT Results and Significance Thresholds in South San Francisco

Analysis Scenario	Total VMT per Service Population	VMT per Service Population Threshold	Home-Based VMT per Resident	VMT per Resident Threshold	Work-Based VMT per Employee	VMT per Employee Threshold
Existing	27.42	23.26	10.28	11.88	16.62	12.07
2040 No Project	27.19		9.42		14.86	
2040 Plus Project	26.80		9.23		13.40	

Notes:
VMT = Vehicle Miles Traveled
VMT calculations account for all VMT including both light-duty and heavy-duty vehicles.
Source: City/County Associations of Governments San Mateo (C/CAG)-Santa Clara Valley Transportation Authority (VTA) Travel Demand Model.

The per capita results in Table 4-3 demonstrate that both residential and employee populations are growing at a faster rate than their respective vehicle miles. As Total VMT increases, the per capita averages decrease due to changing land use and transportation patterns both within South San Francisco and in adjacent cities. Plan Bay Area 2040 projects substantial housing development in San Mateo County, with the greatest density planned around transit corridors, such as Caltrain, BART, and El Camino Real. This development pattern suggests that commute trip lengths at buildout under both the No Project Alternative and the proposed project to South San Francisco would be shorter than they are today, and there would be an anticipated reduction in trips as employees shift from auto transit to alternative transportation options such as bike or walk trips. On the transportation side, existing regional plans include increased service for Caltrain and the ferry, which make transit a more desirable travel option than it is today. These changes would occur with or without the proposed project.

Home-Based VMT per resident in South San Francisco is forecast to decline from the Existing baseline to 2040 No Project Alternative/1999 General Plan and 2040 Plus Project conditions and would be below the VMT threshold for Home-Based VMT. However, Home-Based VMT per resident would be slightly higher under the No Project Alternative/1999 General Plan compared to the

proposed project because this alternative would result in less residential and mixed-use growth around transit corridors. The residential units developed under the No Project Alternative/1999 General Plan would not necessarily be within walking distance of jobs, retail uses, and services as would occur for the proposed project. However, the VMT generated by these units would still be substantially lower than the overall VMT for current residential units in South San Francisco and contribute to meeting long-term VMT reduction goals for residential uses in the City, but not to the same extent as the proposed project. In contrast, most residential growth under the proposed project would be planned to maximize the advantages of transit, including multi-family units with access to transit along El Camino Real, the new Caltrain station, the San Bruno BART Station, or the South San Francisco BART Station, which would result in a greater contribution to VMT reduction goals compared to the No Project Alternative.

The No Project Alternative/1999 General Plan Work VMT per employee in South San Francisco is forecast to decline from the Existing baseline but would remain above the corresponding significance threshold and would be greater than the proposed project. As such, while the No Project Alternative/1999 General Plan would result in a reduction in Work VMT per employee by 2040, the VMT threshold for employment uses would not be met and the impact would remain significant and unavoidable.

In addition, the No Project Alternative/1999 General Plan would not realize the benefits of the enhanced policies and implementing actions of the proposed project that would reduce VMT. These include but are not limited to Policy MOB-2.1, which requires that complete streets improvements be incorporated into all roadway and development projects, and Action MOB-2.1.1, which would ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on VMT. Policy MOB-3.1 promotes mode shift among employers. This would manage the number of vehicle trips, with a focus on promoting mode shift among employers.

In addition to the significant VMT impact, the proposed project would result in a significant and unavoidable freeway offramp queueing impact despite implementation of mitigation measures. The No Project Alternative/1999 General Plan would also be expected to result in a significant and unavoidable impact with regard to freeway offramp queueing; although the level of development would be less than under the proposed project, the No Project Alternative/1999 General Plan would not realize the benefits of the numerous policies and implementing actions of the proposed project that would reduce impacts, nor would it include mitigation measures that would reduce VMT.

The No Project Alternative/1999 General Plan would not reduce the significant and unavoidable impacts of the proposed project to less than significant, and the impact would be greater for exceedance of VMT thresholds than under the proposed project.

Utilities and Service Systems

The proposed project's impacts related to utilities and service systems would be less than significant with the implementation of applicable regulations including new and revised General Plan Update policies and implementing actions. No mitigation is necessary.

Development under the No Project Alternative/1999 General Plan would result in additional residential and nonresidential uses throughout the Planning Area to a lesser extent than under the proposed project. Increased development would increase demand for water, wastewater treatment, storm drainage, electric power, natural gas, and telecommunication services. While the impacts under the No Project Alternative/1999 General Plan would be anticipated to be less than significant, this alternative would not benefit from enhanced policies and implementing actions that would be realized under the proposed project. Therefore, impacts related to utilities and service systems would be greater under No Project Alternative/1999 General Plan as compared to the proposed project.

Wildfire

The proposed project's impacts related to wildfire would be less than significant with the implementation of applicable regulations including new and revised General Plan Update policies and implementing actions. No mitigation is necessary.

As shown in Table 4-1, buildout under the No Project Alternative/1999 General Plan would be less intensive compared to that of the General Plan Update. The City of South San Francisco, San Mateo County, and South San Francisco Fire Department (SSFFD) have plans, policies, actions, and ordinances in place to reduce the risks associated with wildland fires. Future discretionary projects facilitated by the No Project Alternative/1999 General Plan would continue to be evaluated for project-specific impacts at the time they are proposed, the same as for the proposed project. Given that the No Project Alternative/1999 General Plan would not realize the benefits of the enhanced policies and implementing actions of the proposed project, potential impacts would be greater than the proposed project’s impacts despite less intense development, although they would remain less than significant.

4.3.2 - Conclusion

The No Project Alternative/1999 General Plan would have similar impacts to the proposed project’s less than significant or no impacts associated with biological resources, cultural resources, and tribal cultural resources. Because the No Project Alternative/1999 General Plan would not offer the policy enhancements and benefits that the proposed project would, overall impacts would not be reduced to the same degree as the proposed project, resulting in greater impacts associated with aesthetics, light, and glare, air quality, energy, geology, soils, and seismicity, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population, housing, and employment, public services and recreation, utilities and service systems, and wildfire. The significant and unavoidable impacts related to exceedance of the VMT threshold and freeway offramp queueing impacts would remain significant and unavoidable under this alternative, and somewhat greater for VMT impacts than the proposed project. The significant and unavoidable

impacts related to a conflict with the 2017 Clean Air Plan and a cumulatively considerable net increase in criteria pollutants would remain significant and unavoidable under the No Project Alternative/1999 General Plan.

Additionally, the No Project Alternative/1999 General Plan would not meet the majority of project objectives. As the new policies and programs in the proposed project reflect the current goals and vision expressed by City residents, businesses, decision-makers, and other stakeholders, continuing development under the 1999 vision of the No Project Alternative/1999 General Plan would not achieve the first objective of the proposed project. Additionally, the No Project Alternative/1999 General Plan would not update the General Plan or update the CAP to address issues and concerns related to energy, sustainability and climate resiliency, sea level rise, hydrology and water quality, or any other issue raised by City residents and therefore would not meet the second objective of the proposed project. The No Project Alternative/1999 General Plan would not provide additional mitigation for biological resources or cultural and tribal cultural resources or reduce VMT and noise impacts to the same extent as the proposed project. The No Project Alternative/1999 General Plan would also fail to achieve objectives because this alternative would not meet the City's housing needs nor would it include new policies and programs that provide direction for cohesive development to meet the projected population and employment growth. Neither would the No Project Alternative/1999 General Plan meet the last two objectives because it would not update the Zoning Code and would not provide needed updates to address new requirements of State law.

4.4 - Alternative 2—Decreased Employment Alternative

Under the Decreased Employment Alternative, the proposed mitigation measures, policies, and programs in the General Plan Update as well as the Zoning Code Amendments and CAP identified herein would be adopted; however, there would be a 25 percent decrease in nonresidential uses in the East of 101, Lindenville, and El Camino subareas to decrease the number of employment opportunities and improve the job/housing balance in the City. It is assumed that these decreases would occur more than 0.333 mile from existing transit.

The proposed policies and actions in the proposed project, as well as the mitigation measures identified herein, would be adopted but the potential for increased nonresidential development would occur by assuming a 25 percent reduction in proposed commercial and industrial land uses. This could occur through rezoning to decrease the allowable density and/or through other development incentives. Development under the Decreased Employment Alternative could result in 6,890,462 square feet of new commercial/industrial/civic space compared to the 9,187,282 square feet under the proposed project. Accordingly, for purposes of this alternative, it is assumed that the Zoning Code would be updated to reflect the land uses in this alternative, as applicable.

4.4.1 - Impact Analysis

Aesthetics, Light, and Glare

As noted in, Section 3.1, Aesthetics, Light, and Glare, of this Draft Program EIR, the proposed project's impacts to aesthetics, light, and glare would be less than significant or no impact with the implementation of applicable regulations. No mitigation is necessary.

This alternative would result in a net decrease of 2,296,821 square feet of nonresidential development compared to the proposed project at buildout. Like the proposed project, this alternative would ensure potential impacts are less than significant with the implementation of applicable regulations including General Plan Update policies and implementing actions. The decreased nonresidential buildout would be expected to result in a commensurable decrease in building massing, lighting, and surfaces capable of creating glare. Therefore, while still less than significant, the Decreased Employment Alternative would result in slightly decreased impacts on aesthetics, light, and glare as compared to the proposed project.

Air Quality

As noted in Section 3.3, Air Quality, of this Draft Program EIR, the majority of the proposed project's impacts to air quality would be less than significant with the implementation of MMs AIR-1a, AIR-1b, TRANS-1, and applicable regulations including proposed project policies and implementing actions. However, because the proposed project's projected VMT growth outpaces projected population growth, impacts related to a conflict with the 2017 Clean Air Plan and a cumulatively considerable net increase in criteria pollutants would be significant and unavoidable.

The degree of the air quality impact is related to the amount of development, population at buildout, and VMT. This alternative would result in a net decrease of 2,296,821 square feet of nonresidential development compared to the proposed project at buildout. Like the proposed project, this alternative would ensure that the majority of potential impacts are less than significant with the implementation of MMs AIR-1a, AIR-1b, TRANS-1, and applicable regulations including General Plan Update policies and implementing actions. Further, this alternative would benefit from implementation of the updated 2022 CAP, similar to the proposed project. The decreased nonresidential buildout would be expected to result in a commensurable decrease in construction and operational air quality emissions; however, it is not expected to result in a decrease in population compared to the proposed project. Accordingly, this alternative would not realize any reduction in impacts related to population growth.

VMT is also affected by the availability of jobs near available housing. Given the current employment opportunities in the City and the focus on mixed use and residential development under this alternative, a reduction in nonresidential development would result in decreased employment opportunities in areas more than 0.333 mile from transit areas, slightly reducing City residents' dependance on private vehicle travel, and subsequent VMT, for commuting purposes when compared to the proposed project. This shift away from planning for additional employment opportunities could result in a reduction in the number of non-residents commuting into the City for these opportunities. Therefore, the Decreased Employment Alternative could result in a lower VMT growth but the same population growth as the proposed project, resulting in a potential reduction in per capita VMT. Nonetheless, the potential reduction in VMT under this alternative compared to the proposed project cannot be calculated at this time.

Therefore, while the Decreased Employment Alternative would result in slightly reduced VMT compared to the proposed project, because projected VMT growth under this alternative is expected to continue to outpace projected population growth, impacts related to a conflict with the 2017

Clean Air Plan and a cumulatively considerable net increase in criteria pollutants would still remain significant and unavoidable.

Biological Resources

As noted in Section 3.3 Biological Resources, of this Draft Program EIR, the proposed project's impacts to biological resources would be less than significant with the implementation of mitigation measures identified herein, along with applicable regulations.

Similar to the proposed project, future nonresidential development in the East of 101, Lindenville, and El Camino subareas under the Decreased Employment Alternative would primarily occur on parcels that already contain some existing businesses. The decrease in nonresidential development in the identified subareas would not be expected to substantially alter the footprint development compared to development pursuant to the proposed project. Therefore, impacts to biological resources would be substantially similar to those identified for the proposed project and would be less than significant with mitigation.

Cultural Resources and Tribal Cultural Resources

As noted in Section 3.4, Cultural Resources and Tribal Cultural Resources, of this Draft Program EIR, the proposed project's impacts to cultural and tribal cultural resources would be less than significant with the implementation of applicable regulations. No mitigation is necessary.

Similar to the proposed project, future nonresidential development in the East of 101, Lindenville, and El Camino subareas under the Decreased Employment Alternative would primarily occur on parcels that already contain some existing businesses. The decrease in nonresidential development in the identified subareas would not be expected to substantially alter the footprint of development compared to development pursuant to the proposed project. Therefore, impacts to cultural and tribal cultural resources would be substantially similar to those identified for the proposed project and would be less than significant.

Energy

As noted in Section 3.5, Energy, of this Draft Program EIR, the proposed project's impacts to energy resources would be less than significant with the implementation of applicable regulations. No mitigation is necessary.

A 25 percent reduction in nonresidential development in the East of 101, Lindenville, and El Camino subareas would result in a corresponding decrease in energy use compared to the proposed project. This alternative would implement the same policies and actions as identified in the General Plan Update and updated 2022 CAP and would not result in a wasteful or inefficient use of energy. The impact would be slightly less than under the proposed project and would be similarly less than significant.

Geology, Soils, and Seismicity

As noted in Section 3.6, Geology, Soils, and Seismicity, of this Draft Program EIR, the proposed project's impacts to geology, soils, and seismicity would be less than significant with the implementation of applicable regulations. No mitigation is necessary.

Similar to the proposed project, future nonresidential development in the East of 101, Lindenville, and El Camino subareas under the Decreased Employment Alternative would primarily occur on parcels that already contain some existing businesses on previously disturbed soils. The decrease in nonresidential development in the identified subareas would not be expected to substantially alter the footprint of development compared to development pursuant to the proposed project. Therefore, impacts to geology, soils, and seismicity would be substantially similar to those identified for the proposed project and would be less than significant.

Greenhouse Gas Emissions

As noted in Section 3.7, Greenhouse Gas Emissions, of this Draft Program EIR, the proposed project's impacts to greenhouse gas emissions would be less than significant with the implementation of applicable regulations. No mitigation is necessary.

Reduction in nonresidential development under this alternative would result in fewer greenhouse gas emissions from actual land uses compared to the proposed project but is not expected to reduce population estimates. Policies in both the proposed project and this alternative would leverage VMT reduction strategies such as improved pedestrian, bicycle, and transit infrastructure and network, as well as access to local amenities and services achieved by higher densities and mixed-use design to mitigate per capita emissions. It is assumed that this alternative would include policies similar to the proposed project that would further reduce GHG emissions through regulation of construction activities and other known sources and adopt the updated 2022 CAP. As discussed below with respect to traffic impacts, this alternative would be expected to be VMT neutral or slightly reduce VMT due to an anticipated reduction in non-residents commuting to the City for work. The updated 2022 CAP would reduce these impacts to the same degree as the proposed project. Accordingly, GHG impacts under this alternative would be similar to the impacts of the proposed project and would be less than significant with implementation of policies and implementing actions, as well as the CAP.

Hazards and Hazardous Materials

As noted in Section 3.8, Hazards and Hazardous Materials, of this Draft Program EIR, the proposed project's impacts to hazards and hazardous materials would be less than significant with the implementation of applicable regulations. No mitigation is necessary.

The same as the proposed project, this alternative would include several policies and actions that would minimize risk to the public or environment resulting from the inadvertent discovery of hazardous materials on a project site. Development under this alternative would occur on the same parcels identified for nonresidential uses for the proposed project, just at somewhat less intensity. Thus, the impacts of this alternative relative to hazards and hazardous materials would be substantially similar to the impacts of the proposed project and would be less than significant.

Hydrology and Water Quality

As noted in Section 3.9, Hydrology and Water Quality, of this Draft Program EIR, the proposed project's impacts to hydrology and water quality would be less than significant with the implementation of applicable regulations. No mitigation is necessary.

Development under this alternative would occur on the same parcels identified for nonresidential uses as the proposed project, just at somewhat less intensity. Development under this alternative would comply with all applicable regulations pertaining to stormwater runoff, erosion, siltation, and other water quality issues. Thus, the impacts of this alternative relative to hydrology and water quality would be substantially similar to the impacts of the proposed project and would be less than significant.

Land Use and Planning

As noted in Section 3.10, Land Use and Planning, of this Draft Program EIR, the proposed project's impacts to land use and planning would be less than significant with the implementation of applicable regulations. No mitigation is necessary.

This alternative would result in the same general mix of development as the proposed project. Nonresidential development, while reduced compared to the proposed project, would occur on the same parcels identified for the proposed project for these types of land uses. This alternative would not conflict with any applicable land use plan or physically divide an established community. The impacts would be substantially similar to the proposed project and would be less than significant.

Noise

As noted in Section 3.11, Noise, of this Draft Program EIR, the proposed project’s impacts to noise would be less than significant with mitigation and with the implementation of applicable regulations. No mitigation is necessary.

Similar to the proposed project, this alternative could result in reduced traffic noise levels due to lower anticipated ADT generated by the proposed land uses compared to existing conditions. This alternative would result in a net decrease of 2,296,821 square feet of nonresidential development as compared to the proposed project at buildout. Therefore, it is expected that this alternative would similarly result in less than significant noise impacts with the implementation of MM NOI-1. Additionally, the reduction in buildout would be expected to result in a commensurable reduction in construction and operational noise and vibration. Therefore, the Decreased Employment Alternative would result in reduced noise impacts as compared to the proposed project.

Population, Housing, and Employment

As noted in Section 3.12, Population, Housing, and Employment, of this Draft Program EIR, the proposed project’s impacts on population, housing, and employment would be less than significant. No mitigation is necessary.

This alternative would develop the same amount of residential development as the proposed project and the decrease in employment opportunities associated with reduced development would not

impact population estimates. Therefore, impacts on population and housing would be substantially similar to the proposed project. The additional population growth (both in housing and employment) would be considered planned growth, the same as for the proposed project. Furthermore, as the City receives development applications for subsequent development under the proposed project, those applications will be reviewed by the City for compliance with the policies and actions of the General Plan Update and the Municipal Code to ensure the displacement of housing or significant need for new housing does not occur. Although, the Decreased Employment Alternative would provide fewer employment opportunities compared to the proposed project, potential adverse environmental impacts would be substantially similar to the proposed project and would be less than significant.

Public Services and Recreation

As noted in Section 3.13, Public Services and Recreation, of this Draft Program EIR, the proposed project's impacts on public services and recreation would be less than significant. No mitigation is necessary.

The Decreased Employment Alternative would result in 2,296,821 square feet less of nonresidential space than under the proposed project. This less dense nonresidential development would result in an incremental decrease in demand for public services compared to the proposed project. Since the same amount of residential uses would be constructed under this alternative, and population estimates would not be affected, the impacts on recreation would be substantially similar to those identified for the proposed project. While impacts would remain less than significant, the same as for the proposed project, there would be slightly reduced impacts on demands for public services.

Transportation

As noted in Section 3.14, Transportation, of this Draft Program EIR, the proposed project's impacts on transportation would be significant and unavoidable with respect to exceedance of the VMT threshold and freeway offramp queueing impacts, even with the implementation of all feasible policies, implementing actions, and identified mitigation measures.

The VMT growth facilitated by the proposed project would constitute an approximately 94 percent growth through 2040 while population growth facilitated by the proposed project would constitute an approximately 61 percent growth through 2040. A portion of the VMT growth is anticipated to be the result of increased employment opportunities under the proposed project.

The Decreased Employment Alternative would include the same amount of residential and mixed uses as the proposed project but decrease nonresidential development by 2,296,821 square feet. The City is currently job rich, with abundant employment opportunities for residents and a very low unemployment rate. It is unlikely that a reduction in employment opportunities would result in an increase in residents commuting outside the City for employment. The decrease in employment opportunities could, however, result in fewer non-residents commuting into the City for employment, which would reduce VMT. The reduction in VMT and commuting would also reduce freeway off-ramp queuing as compared to the proposed project. However, given that the jobs-housing imbalance is a regional issue and significant VMT impacts are largely a result of this

imbalance, the local reduction in VMT as compared to the proposed project would not be enough to bring per capita VMT below the significance threshold. This alternative would avoid a reduction in nonresidential uses within 0.333 mile of existing transit, thus preserving the City's goal of promoting mixed use near transit. As such, while the Decreased Employment Alternative would result in reduced transportation impacts as compared to the proposed project, impacts would remain significant and unavoidable under this alternative.

Utilities and Service Systems

As noted in Section 3.15, Utilities and Service Systems, of this Draft Program EIR, the proposed project's impacts on utilities and service systems would be less than significant without mitigation. No mitigation is necessary.

A decreased level of nonresidential development would result in less demand for utilities and service systems; water demand would be less, as would wastewater and solid waste generation. This alternative would result in a similar less than significant impact as the proposed project, and impacts would be slightly decreased compared to the proposed project.

Wildfire

As noted in Section 3.16, Wildfire, of this Draft Program EIR, the proposed project's impacts on risks from wildfire would be less than significant. No mitigation is necessary.

Future nonresidential development in the East of 101, Lindenville, and El Camino subareas under the Decreased Employment Alternative would primarily occur on parcels that already contain some existing businesses, but at a slightly decreased density as compared to the proposed project. According to the California Department of Forestry and Fire Protection (CAL FIRE), the Planning Area is not located in a Fire Hazard Severity Zone (FHSZ) in a State Responsibility Area (SRA) or a Very High Fire Hazard Severity Zone (VHFHSZ) in a local, State, or federal responsibility area. The Planning Area is adjacent to land identified as Moderate FHSZ within an SRA and High FHSZ within an SRA (San Bruno Mountain State Park). While there are no Very High, High, or Moderate FHSZs within the city limits, Sign Hill Park is susceptible to wildfires. As development under this alternative would occur in the same locations as the proposed project, the impacts would be less than significant and the same as for the proposed project.

4.4.2 - Conclusion

The Decreased Employment Alternative would have similar less than significant impacts compared to the proposed project with respect to biological resources, cultural and tribal cultural resources, geology, soils and seismicity, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, population, housing and employment, and wildfire. This alternative would incrementally decrease the proposed project's less than significant impacts related to aesthetics, light and glare, air quality, energy, noise, public services, recreation, and utilities. This alternative would slightly decrease the significant and unavoidable impacts associated with exceedance of the VMT threshold, freeway offramp queuing, a conflict with the 2017 Clean Air Plan, and a cumulatively considerable net increase in criteria pollutants, although not to less than significant. Similar to the proposed project, the Decreased Employment Alternative would be

required to comply with identified mitigation along with applicable regulations including General Plan Update policies and implementing actions.

The Decreased Employment Alternative would partially achieve the project objectives related to developing a resilient community that is prepared for climate change by updating the CAP as part of the alternative. Additionally, this alternative would meet objectives to develop a well-connected transportation system by encouraging development near transit, increasing transit ridership, improving circulation for all modes, and improving the pedestrian environment. Because of decreased capacity for jobs, this alternative is less likely to meet project objectives relating to economic development and job growth because this alternative would prioritize increased residential development over nonresidential development, which does not reflect the goals and vision expressed by City stakeholders to the same extent as the proposed project. Similar to the proposed project, this alternative would incorporate updates to the Zoning Code and provide updates to address existing new laws.

4.5 - Alternative 3—Increased Residential Alternative

This alternative would propose an increase in residential development along the El Camino Real transit corridor through increased density zoning (see Exhibit 4-2). Increased residential options near a transit corridor would further reduce VMT to a slightly greater extent than the proposed project. Accordingly, the El Camino Real transit corridor is being considered for residential development under the Increased Residential Alternative because it is a high-quality transit corridor; it is proximate to the BART station and is an important transit corridor in San Mateo County. In addition, as the proposed density along the El Camino Real corridor is less than the proposed densities in the Lindenville and East of 101 subareas under the proposed project, the El Camino Real corridor is better suited to accommodate increased residential uses as considered under this alternative. This alternative would result in an increase of approximately 500 dwelling units compared to the proposed project and commensurate increase in population. An additional 3,017 residential units would be added to this corridor (compared to the 2,524 units under the proposed project).

The El Camino subarea is currently comprised of approximately 95 acres, which the proposed project has identified as Medium-Density Mixed Use. Under this alternative, some of these parcels would be rezoned to High-Density Mixed Use, with a maximum of 180 dwelling units per acre and heights of up to 120 feet. The Medium-Density Mixed Use under the proposed project would accommodate a maximum of 120 dwelling units per acre with a maximum building height of 85 feet.

This alternative assumes the Zoning Code would be amended to reflect the increased residential land uses and the CAP would be updated.

4.5.1 - Impact Analysis

Aesthetics, Light, and Glare

As noted in Section 3.1, Aesthetics, Light and Glare, of this Draft Program EIR, the proposed project's impacts to aesthetics, light, and glare would be less than significant or no impact. No mitigation is necessary.

This alternative would result in a net increase of approximately 500 dwelling units compared to the proposed project at buildout. Building heights would increase on the parcels designated High-Density Mixed Use from 85 feet as proposed under the proposed project to a maximum of 120 feet with this alternative. Density per acre would be increased from 120 dwelling units per acre (du/acre) to 180 du/acre for those parcels designated as High-Density Mixed Use. Like the proposed project, this alternative would ensure potential impacts are less than significant with the implementation of applicable regulations including General Plan Update policies and implementing actions. The increased residential buildout would be expected to result in a corresponding increase in building massing, lighting, and surfaces capable of creating glare. Therefore, while still less than significant, the Increased Residential Alternative would result in slightly increased impacts on aesthetics, light, and glare as compared to the proposed project.

Air Quality

As noted in Section 3.2, Air Quality, of this Draft Program EIR, the majority of the proposed project's impacts to air quality would be less than significant with the implementation of MMs AIR-1a, AIR-1b, TRANS-1, and applicable regulations including proposed project policies and implementing actions. However, because the proposed project’s projected VMT growth outpaces projected population growth, impacts related to a conflict with the 2017 Clean Air Plan and a cumulatively considerable net increase in criteria pollutants would be significant and unavoidable.

As mentioned above, development, population and VMT influence air quality impacts. The Increased Residential Alternative would result in a net increase of approximately 500 dwelling units compared to the proposed project at buildout. Like the proposed project, this alternative would ensure that the majority of potential impacts are less than significant with the implementation of MMs AIR-1a, AIR-1b, MM TRANS-1, and applicable regulations including General Plan Update policies and implementing actions. Further, this alternative would benefit from implementation of the updated 2022 CAP, similar to the proposed project. However, the increased residential buildout would be expected to result in a commensurable increase in construction and operational criteria air pollutant emissions. The additional housing would also accommodate additional population growth that would have an incremental influence on air quality impacts. This potential increase in impacts compared to the proposed project may be offset by an anticipated reduction in per capita VMT under this alternative.

VMT is affected, in part, by the distance between available jobs and nearby housing. Given the focus on mixed use and residential development under this alterative, the Increased Residential Alternative may reduce per capita VMT to a slightly greater extent compared to the proposed project because it would provide increased housing near the City’s employment centers. In addition, the greater population growth experienced under this alternative compared to the proposed project would add to the incremental reduction in per capita VMT generation in the city. Nonetheless, the potential reduction in VMT under this alternative compared to the proposed project cannot be calculated at this time. Considering the high-commute nature of the City and surrounding communities, the forecasted VMT growth is expected to continue to outpace the forecasted population growth facilitated by the proposed project. Therefore, this alternative would also be considered inconsistent with the 2017 Clean Air Plan and could result in the generation of a

cumulatively considerable net increase in criteria air pollutants. Therefore, the Increased Residential Alternative would result in substantially similar impacts on air quality compared to the proposed project, and impacts related to a conflict with the 2017 Clean Air Plan and a cumulatively considerable net increase in criteria pollutants would still remain significant and unavoidable.

Biological Resources

As noted in Section 3.3, Biological Resources, of this Draft Program EIR, the proposed project's impacts to biological resources would be less than significant with the implementation of mitigation measures identified herein.

Similar to the proposed project, future development under the Increased Residential Alternative would primarily occur on parcels that already contain some existing homes and businesses. The increase in residential development along the El Camino Real transit corridor would not be expected to substantially alter the development footprint compared to development pursuant to the proposed project. Therefore, impacts to biological resources would be substantially similar to those identified for the proposed project and would be less than significant with mitigation.

Cultural Resources and Tribal Cultural Resources

As noted in Section 3.4, Cultural Resources and Tribal Cultural Resources, of this Draft Program EIR, the proposed project's impacts to cultural and tribal cultural resources would be less than significant with the implementation of applicable regulations. No mitigation is necessary.

Similar to the proposed project, future development under the Increased Residential Alternative would primarily occur on parcels that already contain some existing homes and businesses. The increase in residential development along the El Camino Real transit corridor would not be expected to substantially alter the footprint of development compared to development pursuant to the proposed project. Therefore, impacts to cultural and tribal cultural resources would be substantially similar to those identified for the proposed project and would be less than significant.

Energy

As noted in Section 3.5, Energy, of this Draft Program EIR, the proposed project's impacts to energy resources would be less than significant with the implementation of applicable regulations. No mitigation is necessary.

An increase in the number of dwelling units in the Planning Area would result in a corresponding increase in energy use compared to the proposed project. The Increased Residential Alternative would implement the same policies and actions as identified in the General Plan Update and updated 2022 CAP and would not result in a wasteful or inefficient use of energy. The impact would be slightly greater than under the proposed project and would be similarly less than significant.

Geology, Soils, and Seismicity

As noted in Section 3.6, Geology Soils, and Seismicity, of this Draft Program EIR, the proposed project's impacts to geology, soils, and seismicity would be less than significant with the implementation of applicable regulations. No mitigation is necessary.

Similar to the proposed project, future development under the Increased Residential Alternative would primarily occur on parcels that already contain some existing homes and businesses on previously disturbed soils. The increase in residential development along the El Camino Real transit corridor would not be expected to substantially alter the footprint of development compared to development pursuant to the proposed project or directly or indirectly increase risks associated with rupture of a known fault as shown in Exhibit 3.6-3. Therefore, impacts to geology, soils, and seismicity would be substantially similar to those identified for the proposed project and would be less than significant.

Greenhouse Gas Emissions

As noted in Section 3.7, Greenhouse Gas Emissions, of this Draft Program EIR, the proposed project's impacts to GHG emissions would be less than significant with the implementation of applicable regulations. No mitigation is necessary.

The Increased Residential Alternative would result in nominally greater GHG emissions compared to the proposed project because, among other factors, additional residential uses would increase the use of electricity (e.g., heating, ventilation, and air conditioning; lighting; appliances). This alternative would also result in greater overall VMT compared to the proposed project due to the introduction of additional residents in the City generating vehicle trips and subsequent VMT. However, per capita VMT could reduce when compared with the proposed project due to an anticipated reduction in employees traveling to reach employment opportunities. Nonetheless, the actual reduction in per capita VMT under this alternative cannot be quantified at this time due to limitations in inter-jurisdictional commuting patterns and would not be expected to be substantial. While GHG emissions could be nominally greater than those experienced by the proposed project, per capita GHG emissions would be substantially similar to those experienced by the proposed project. Therefore, the Increased Residential Alternative would be expected to remain less than significant with implementation of General Plan policies and implementing actions, as well as those contained in the updated 2022 CAP.

Hazards and Hazardous Materials

As noted in Section 3.8, Hazards and Hazardous Materials, of this Draft Program EIR, the proposed project's impacts to hazards and hazardous materials would be less than significant with the implementation of applicable regulations. No mitigation is necessary.

The same as the proposed project, the Increased Residential Alternative would include several policies and actions that would minimize risk to the public or environment resulting from the inadvertent discovery of hazardous materials on a project site. Development under this alternative would occur on the same parcels as the proposed project, just at a greater residential intensity along the El Camino Real transit corridor. Development under this alternative would comply with all applicable regulations pertaining to hazards and hazardous materials. Thus, the impacts of this alternative relative to hazards and hazardous materials would be substantially similar to the impacts of the proposed project and would be less than significant.

Hydrology and Water Quality

As noted in Section 3.9, Hydrology and Water Quality, of this Draft Program EIR, the proposed project's impacts to hydrology and water quality would be less than significant with the implementation of applicable regulations. No mitigation is necessary.

Development under the Increased Residential Alternative would occur on the same parcels as the proposed project, just at a greater residential intensity along the El Camino Real transit corridor. Development under this alternative would comply with all applicable regulations pertaining to stormwater runoff, erosion, siltation, and other water quality issues. Thus, the impacts of this alternative relative to hydrology and water quality would be substantially similar to the impacts of the proposed project and would be less than significant.

Land Use and Planning

As noted in Section 3.10, Land Use and Planning, of this Draft Program EIR, the proposed project's impacts to land use and planning would be less than significant with the implementation of applicable regulations. No mitigation is necessary.

Development under this alternative would occur on the same parcels identified for the proposed project. The Increased Residential Alternative would be internally consistent and would not conflict with any applicable land use plan or physically divide an established community. However, the increased density and height of this alternative would result in greater impacts with regard to land use compatibility with adjacent single-family residential uses. Therefore, the impacts would be greater than the proposed project but would remain less than significant.

Noise

As noted in Section 3.11, Noise, of this Draft Program EIR, the proposed project’s impacts to noise would be less than significant with mitigation and with the implementation of applicable regulations. No mitigation is necessary.

Similar to the proposed project, the Increased Residential Alternative could result in increased traffic noise levels due to higher anticipated ADT generated by the proposed land uses compared to existing conditions. This alternative would result in a net increase of approximately 500 dwelling units along the El Camino Real transit corridor as compared to the proposed project at buildout. It is expected that this alternative would similarly result in less than significant noise impacts with the implementation of MM NOI-1. Additionally, the increase in buildout would be expected to result in an associated increase in construction and operational noise and vibration from an increase in traffic and mechanical equipment. Therefore, the Increased Residential Alternative would result in increased noise impacts as compared to the proposed project but would remain less than significant.

Population, Housing, and Employment

As noted in Section 3.12, Population, Housing and Employment, of this Draft Program EIR, the proposed project’s impacts on population, housing, and employment would be less than significant. No mitigation is necessary.

The Increased Residential Alternative would develop approximately 500 more dwelling units than the proposed project. Impacts on population and housing would be substantially similar to the proposed project. The Increased Residential Alternative would be accompanied by the same increase in employment opportunities as the proposed project, and therefore result in a slightly lower existing jobs to employed resident's ratio than the proposed project, meaning potentially fewer employees commuting from outside the City. The additional population growth (both in housing and employment) would be considered planned growth, the same as for the proposed project. Furthermore, as the City receives development applications for subsequent development under the proposed project, those applications will be reviewed by the City of South San Francisco for compliance with the policies and actions of the General Plan Update, Zoning Code, and the Municipal Code to ensure the displacement of housing or significant need for new housing does not occur. Impacts would be substantially similar to the proposed project and would be less than significant.

Public Services and Recreation

As noted in Section 3.13, Public Services and Recreation, of this Draft Program EIR, the proposed project's impacts on public services and recreation would be less than significant. No mitigation is necessary.

The Increased Residential Alternative would result in approximately 500 more dwelling units than the proposed project. This increased development would result in an incremental increase in demand for public services compared to the proposed project. Since a greater number of residential uses would be constructed under this alternative, the impacts on recreation would be somewhat greater compared to the impacts identified for the proposed project. Impacts would remain less than significant, the same as for the proposed project, but there would be slightly increased impacts on demands for public services.

Transportation

As noted in Section 3.14, Transportation, of this Draft Program EIR, the proposed project's impacts on transportation would be significant with respect to exceedance of the VMT threshold and freeway offramp queueing impacts, even with the implementation of all feasible policies and implementing actions and identified mitigation measures.

The Increased Residential Alternative would include the same amount of nonresidential development as the proposed project but increase the number of proposed dwelling units by approximately 500. Because of the higher densities allowed, total population within the City would increase under this alternative in comparison to the proposed project. This would reduce the local jobs-housing imbalance and offer increased opportunity for people employed in South San Francisco to live in closer proximity to their job. Since the proposed increase in residential development would occur along a transit corridor and near the BART station, it is assumed that a higher percentage of residents in these areas would utilize nearby transit resulting in a decrease in VMT per capita. Additionally, both this alternative and the proposed project would experience the same total employment volume, but because the Increased Residential Alternative would result in a higher total population, the VMT per capita would be slightly lower than the proposed project. Further, it is

reasonable to anticipate that increased residential options near a transit corridor would further reduce VMT to a slightly greater extent than the proposed project despite the incremental increase in the number of City residents. This alternative would also help further the City's goal of promoting mixed use near transit. While this alternative would reduce VMT compared to the proposed project, because it promotes additional housing near transit and employment opportunities, the VMT would not be reduced to the extent that it would fall below the threshold of significance. Given that the jobs-housing imbalance is a regional issue and significant VMT impacts are largely a result of this imbalance, the local reduction in VMT as compared to the proposed project would not be enough to bring per capita VMT below the significance threshold. Therefore, the impact would remain significant and unavoidable, although less than under the proposed project.

Utilities and Service Systems

As noted in Section 3.15, Utilities and Service Systems, of this Draft Program EIR, the proposed project's impacts on utilities and service systems would be less than significant without mitigation. No mitigation is necessary.

An increased level of residential development would result in greater demand for utilities and service systems; water demand would be greater, as would wastewater and solid waste generation. This increase would not be expected to be substantial. Additionally, the potential demand for new utility infrastructure resulting from the overall increase in new development under this alternative could result in new physical disturbance and increased environmental impacts. As a result, this alternative would result in a less than significant impact; however, impacts would be slightly increased compared to the proposed project.

Wildfire

As noted in Section 3.16, Wildfire, of this Draft Program EIR, the proposed project's impacts on risks from wildfire would be less than significant with implementation of General Plan Update policies and implementing actions. No mitigation is necessary.

The Increased Residential Alternative would result in development on the same parcels identified for the proposed project at slightly increased residential density along the El Camino Real transit corridor. According to CAL FIRE, the Planning Area is not located in a FHSZ in an SRA or a VHFHSZ in a local, State, or federal responsibility area. The Planning Area is adjacent to land identified as Moderate FHSZ within an SRA and High FHSZ within an SRA (San Bruno Mountain State Park). While there are no Very High, High, or Moderate FHSZs within the city limits, Sign Hill Park is susceptible to wildfires. As development under this alternative would occur in the same locations as the proposed project, and the increased residential uses would not be located in close proximity to San Bruno Mountain State Park or Sign Hill Park, the impacts would be less than significant and the same as for the proposed project.

4.5.2 - Conclusion

The Increased Residential Alternative would have similar less than significant impacts compared to the proposed project with respect to air quality, biological resources, cultural resources and tribal cultural resources, geology, soils, and seismicity, hazards and hazardous materials, hydrology and

water quality, population, housing, and employment, and wildfire. This alternative would result in greater impacts associated with aesthetics, light, and glare, energy, GHG emissions, land use and planning, noise, public services and recreation, and utilities and service systems. The Increased Residential Alternative would further decrease VMT compared to the proposed project, but not to below the significance threshold and the significant and unavoidable impacts associated with exceedance of the VMT threshold, freeway offramp queuing, a conflict with the 2017 Clean Air Plan, and a cumulatively considerable net increase in criteria pollutants would remain. Similar to the proposed project, the Decreased Employment Alternative would be required to comply with identified mitigation along with applicable regulations including internally consistent General Plan Update and Zoning Code policies and implementing actions.

The Increased Residential Alternative would achieve the project objectives related to developing a resilient community that is prepared for climate change by updating the CAP to reduce greenhouse gas emissions as part of the alternative. Additionally, this alternative would meet objectives to provide affordable, safe, attractive, amenity-rich neighborhoods, develop a well-connected transportation system by encouraging development near transit, increasing transit ridership, improving circulation for all modes, and improving the pedestrian environment. Similar to the proposed project, this alternative would incorporate updates to the Zoning Code and provide updates to address existing new laws. However, because this alternative would also result in incrementally greater impacts on aesthetics, air quality, energy, greenhouse gas emissions, land use and planning, noise, public services and recreation, and utilities it would not meet the City's fundamental objective to address issues and concerns identified by South San Francisco residents, businesses, decision-makers, and other stakeholders to the same degree as the proposed project. Nor would it address the City's goal of providing attractive, balanced housing to the same degree due to the increased aesthetic impacts of locating increased height buildings adjacent to single-family residential neighborhoods.

4.6 - Environmentally Superior Alternative

The qualitative environmental effects of each alternative in relation to the proposed project are summarized in Table 4-4.

Table 4-4: Summary of Alternatives

Environmental Topic Area	Alternative 1: No Project Alternative	Alternative 2: Decreased Employment Alternative	Alternative 3: Increased Residential Alternative
Aesthetics, Light, and Glare	>	<	>
Air Quality	>	<	≈
Biological Resources	≈	≈	≈
Cultural Resources and Tribal Cultural Resources	≈	≈	≈
Energy	>	<	>
Geology, Soils, and Seismicity	>	≈	≈

Environmental Topic Area	Alternative 1: No Project Alternative	Alternative 2: Decreased Employment Alternative	Alternative 3: Increased Residential Alternative
Greenhouse Gas Emissions	>	≈	>
Hazards and Hazardous Materials	>	≈	≈
Hydrology and Water Quality	>	≈	≈
Land Use and Planning	>	≈	>
Noise	>	<	>
Population, Housing, and Employment	>	≈	≈
Public Services and Recreation	>	<	>
Transportation	>	<	<
Utilities and Service Systems	>	<	>
Wildfire	>	≈	≈

Notes”
≈ Substantially similar impacts
> Increased impacts
< Reduced impacts
Source: FirstCarbon Solutions (FCS) 2022.

CEQA Guidelines Section 15126(e)(2) requires an EIR to identify an environmentally superior alternative. If the No Project Alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives.

None of the alternatives analyzed would reduce the significant and unavoidable impacts related to exceedance of VMT thresholds, freeway offramp queueing, a conflict with the 2017 Clean Air Plan, and a cumulatively considerable net increase in criteria pollutants, to below a level of significance, although the Decreased Employment Alternative and Increased Residential Alternative would reduce VMT somewhat more than the proposed project. Most of the less than significant impacts in other resource areas would be substantially similar to, although incrementally greater or less than, the impacts of the proposed project. The Increased Residential Alternative would result in incrementally greater impacts on aesthetics, light, and glare, energy, GHG emissions, land use and planning, noise, public services and recreation, and utilities and service systems. The Decreased Employment Alternative would result in incrementally reduced impacts on aesthetics, light, and glare, air quality, energy, noise, public services and recreation, and utilities and service systems.

The No Project Alternative would not meet the project objectives. The Decreased Employment Alternative and the Increased Residential Alternative would meet many of the project objectives but would likely not meet the fundamental project objective related to economic development and job growth because these alternatives would prioritize increased residential development over nonresidential development, which does not reflect the goals and vision expressed by City stakeholders to the same extent as the proposed project.

As shown in Table 4-1, the Decreased Employment Alternative is the environmentally superior alternative because it would reduce nonresidential development while maintaining the same level of residential and mixed-use development. This reduced buildout potential would result in an overall reduction in the level of impacts.

4.7 - Alternatives Rejected From Further Consideration

CEQA Guidelines 15126.6(c) requires an EIR to discuss alternatives that were initially considered but rejected from further consideration. Alternatives that fail to meet the fundamental project purpose need not be addressed in detail in an EIR. (*In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1165-1167.) The following are alternatives that were initially considered but rejected from further consideration for the reasons described below.

4.7.1 - Alternative Location

CEQA Guidelines Section 15126.6(f)(2) sets forth considerations to be used in evaluating an alternative location. The section states that if a lead agency concludes that no feasible alternative locations exist for the proposed action, it must disclose its reasons for that conclusion.

In this case, an alternative location does not constitute a feasible alternative because the project in question consists of a comprehensive update to the City of South San Francisco General Plan, Zoning Code Amendments, and Climate Action Plan. A General Plan serves as the comprehensive land use planning document for the jurisdiction that adopts it; as such, the geographical area encompassed by the plan is an immutable, fundamental characteristic. Similarly, the Zoning Code and Climate Action Plan address the entire City. Thus, it is not possible to evaluate an alternative location for programmatic planning documents such as the City's General Plan, Zoning Code, or Climate Action Plan.

4.7.2 - Expanded Sphere of Influence Alternative

This alternative was suggested during comments on the NOP. It would facilitate annexation of the unincorporated island in the southwestern portion of the City west of El Camino Real and north of Northwood Drive to accommodate future development and potentially increased housing. This area is included in the Planning Area evaluated in this EIR. Therefore, impacts to future development in the unincorporated portion of the City are included in this document. Additionally, there are no plans to annex land adjacent to existing city limits; for these reasons, it is unnecessary to further evaluate this as a separate alternative.

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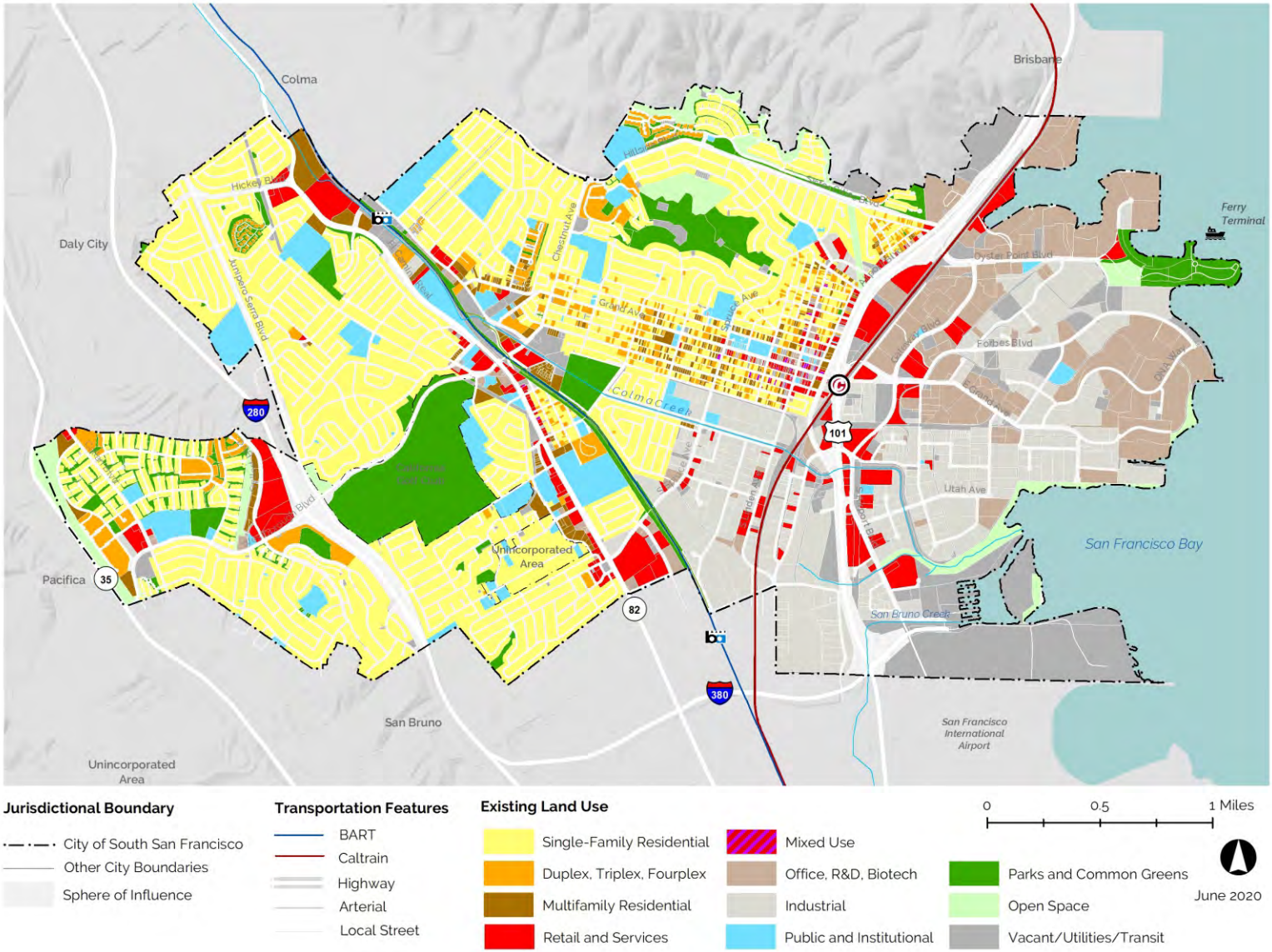

Source: Raimi + Associates, June 2020.

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Exhibit 4-1
Existing Land Use Designations - No Project Alternative

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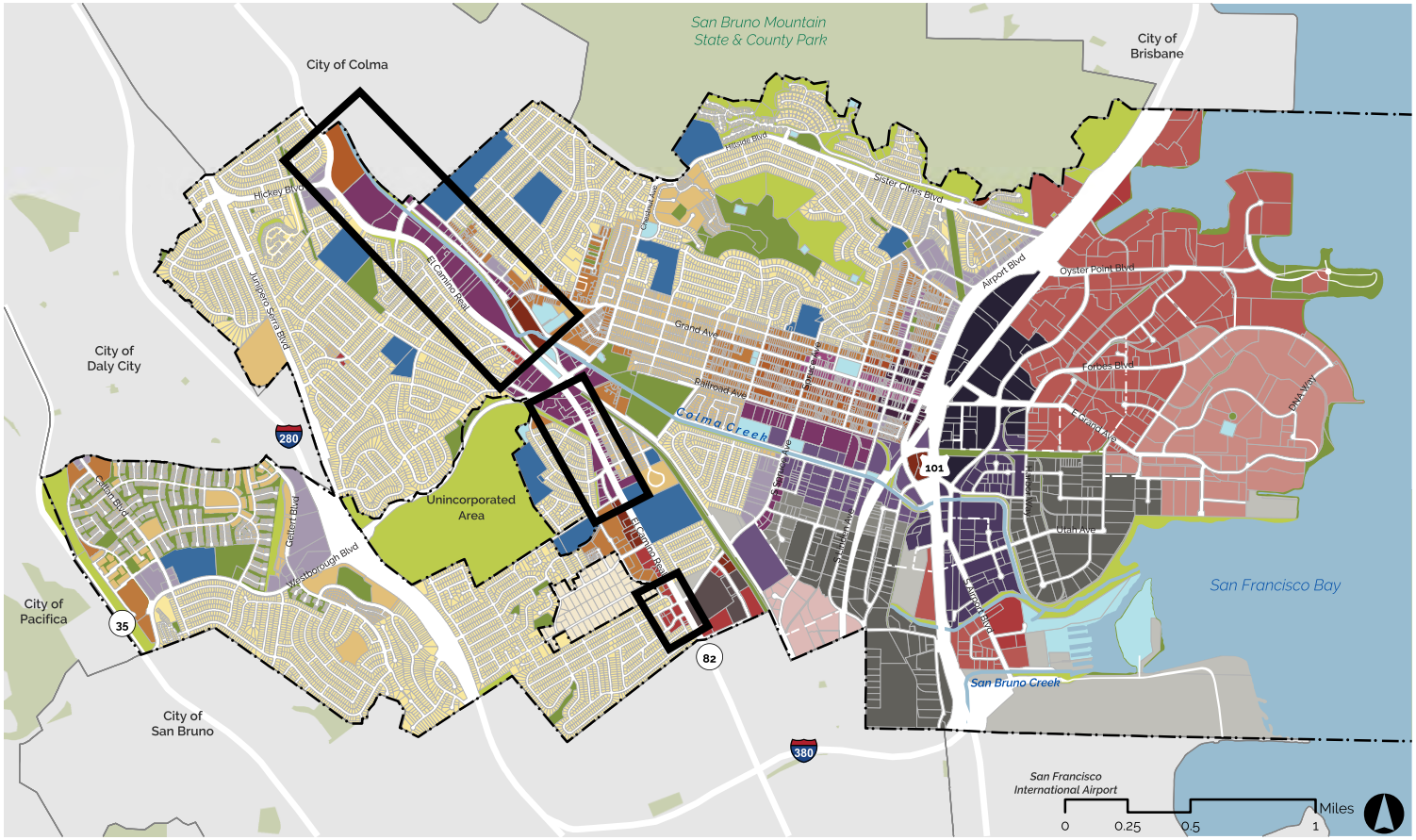

Residential

- San Mateo County Low Density Residential
- Low Density Residential
- Medium Density Residential
- Medium High Density Residential
- High Density Residential
- Downtown Residential Core
- Urban Residential

Non-Residen

- Business and Professional Office
- Business Technology Park
- Business Technology Park High
- Community Commercial
- Oyster Point Coastal Commercial

Mixed Us

- Low Density Mixed Use
- Lindenville Neighborhood Center
- Grand Avenue Core
- Medium Density Mixed Use
- High Density Mixed Use
- East of 101 Mixed Use
- Downtown Transit Core
- East of 101 Transit Core
- Mixed Industrial
- Mixed Industrial High
- Industrial Transition Zone

Civic/Other

- Public
- School
- Parks and Recreation
- Open Space
- Transportation
- Planned Development
- Streams
- Proposed road network additions

Source: Raimi + Associates, 2022.

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Exhibit 4-2
Alternative 3 - Areas of Increased Residential Density

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CHAPTER 5: OTHER CEQA CONSIDERATIONS

California Environmental Quality Act (CEQA) Guidelines Section 15126 requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this analysis, the Draft Program Environmental Impact Report (Draft Program EIR) must also identify (1) significant environmental effects of the proposed project; (2) significant environmental effects which cannot be avoided if the proposed project is implemented; (3) significant irreversible environmental changes which would be involved in the proposed project should it be implemented; (4) growth-inducing impact of the proposed project; (5) mitigation measures proposed to minimize the significant effects; and (6) alternatives to the proposed project.

This chapter provides a discussion of other CEQA-mandated topics including significant unavoidable impacts, growth inducement, and significant irreversible environmental changes which would be involved in the proposed project should it be implemented. Chapter 3, Environmental Impact Analysis, describes the significant environmental effects of the proposed project and provides mitigation measures proposed to minimize significant effects. Chapter 4, Alternatives to the Proposed Project, discusses alternatives to the proposed project.

5.1 - Significant Unavoidable Impacts

CEQA Guidelines Section 15126.2(c) requires an EIR to describe significant environmental effects of the proposed project that cannot be avoided if the proposed project were implemented.

The proposed project was analyzed for potentially significant impacts related to each of the environmental issues discussed in Sections 3.1 through 3.16. The results of the analysis indicate that the proposed project would result in the following significant and unavoidable impacts:

- **Project-Level Vehicle Miles Traveled:** The proposed project's Vehicle Miles Traveled (VMT) would result in a significant impact for citywide Total VMT Per Service Population and for Work-Based VMT Per Employee. The proposed project would implement Mitigation Measure (MM) TRANS-1, which would require the City to implement its Transportation Demand Management (TDM) Ordinance as part of the Zoning Code Amendments and parking requirements to reduce project-generated VMT. MM TRANS-1 also requires the City to update its TDM Ordinance and parking requirements every 5 to 10 years and establish an East of 101 Area Trip Cap, to achieve the maximum feasible reductions in vehicle travel. However, even with the implementation of the General Plan Update policies and actions and implementation of MM TRANS-1, because the effectiveness of VMT reduction strategies cannot be quantified in this programmatic analysis, the City of South San Francisco may not achieve the overall VMT threshold reduction level and the impact would remain significant and unavoidable.
- **Project-Level Roadway Safety:** Implementation of the proposed project would increase vehicle trips on the City's freeway ramps, which would cause vehicle queues to exceed offramp storage capacity or exacerbate offramps that already experience offramp queues

exceeding storage capacity, resulting in a potentially significant impact. The proposed project would implement MM TRANS-4, which would require the City to work with the California Department of Transportation (Caltrans) to develop improvement measures for freeway offramps and adjacent intersections that help manage offramp queues to minimize queueing hazards. MM TRANS-1 is also applicable and would be implemented to minimize freeway offramp queues. However, even with the implementation of General Plan Update policies and actions and implementation of MM TRANS-4 and MM TRANS-1, given the uncertainty around specific operational conditions and ability to mitigate such conditions in a constrained right-of-way, this impact remains significant and unavoidable.

- **Cumulative VMT:** Cumulative projects in the nine-county Bay Area may generate new VMT, which would be added to the roadway network within the geographic context. All cumulative projects would be required to comply with County and local ordinances and General Plan policies that address VMT, as well as mitigate their fair share of impacts related to VMT. Nonetheless, the proposed project, in conjunction with other past, present, and future projects, would have a cumulatively significant impact related to VMT. The proposed project would implement MM TRANS-1, which would require the City to implement its TDM Ordinance as part of the Zoning Code Amendments and parking requirements to reduce project-generated VMT. MM TRANS-1 also requires the City to update its TDM Ordinance and parking requirements every 5 to 10 years and establish an East of 101 Area Trip Cap, to achieve the maximum feasible reductions in vehicle travel. However, even with incorporation of MM TRANS-1 which would partially reduce VMT impacts, the impacts would remain significant and unavoidable. As the proposed project's impacts related to VMT are significant and unavoidable, the proposed project's incremental contribution to the cumulative impact is significant and the proposed project's contribution to cumulative VMT impacts would be cumulatively considerable.
- **Cumulative Roadway Safety:** Cumulative projects in the nine-county Bay Area may generate new VMT, which would be added to the roadway network, potentially increasing vehicle trips on the City's freeway ramps, which would cause vehicle queues to exceed offramp storage capacity or exacerbate offramps that already experience offramp queues exceeding storage capacity. All cumulative projects would be required to mitigate for their impacts, as well as ensure that roadway safety is maintained, and comply with applicable policies in local and regional planning documents. Nonetheless, there would remain a cumulatively significant impact related to roadway safety. The proposed project would implement MM TRANS-4, which would require the City to work with Caltrans to develop improvement measures for freeway offramps and adjacent intersections that help manage offramp queues. Implementation of MM TRANS-1 would also assist in minimizing freeway offramp queues. However, even with incorporation of MM TRANS-4 and MM TRANS-1, the impacts would remain significant and unavoidable. As the proposed project's impacts to the City's freeway ramps are significant and unavoidable, the proposed project's incremental contribution to the cumulative impact is considered significant and the proposed project's contribution to roadway safety cumulative impacts would be cumulatively considerable.
- **Project-Level Conflict with 2017 Bay Area Clean Air Plan:** The VMT growth facilitated by the proposed project would constitute an approximately 94 percent growth through 2040 while

population growth facilitated by the proposed project would constitute an approximately 61 percent growth through 2040. The forecasted VMT growth would outpace the forecasted population growth facilitated by the proposed project. Therefore, the proposed project would be considered inconsistent with the 2017 Clean Air Plan. The proposed project would implement MM TRANS-1, which would achieve the maximum feasible reductions in vehicle travel. However, even with the implementation of the General Plan Update policies and actions and implementation of MM TRANS-1, because the effectiveness of VMT reduction strategies cannot be quantified in this programmatic analysis, the City of South San Francisco may not achieve the overall VMT threshold reduction level. As such, this impact would be significant and unavoidable.

- **Project-Level Criteria Air Pollutants:** Because the proposed project's projected VMT growth outpaces projected population growth, the proposed project would result in a cumulatively considerable net increase in criteria pollutants, and this impact would be potentially significant. The proposed project would implement MM TRANS-1, which would achieve the maximum feasible reductions in vehicle travel. However, as there is no reasonable mitigation that could be implemented to increase population projections while keeping VMT growth to a minimum in an area that is already fully urbanized and built out, such as the City of South San Francisco, this impact would remain significant and unavoidable after mitigation.
- **Cumulative Conflict with 2017 Bay Area Clean Air Plan:** Development envisioned by the proposed project would be inconsistent with the 2017 Bay Area Clean Air Plan, since it would facilitate VMT growth which outpaces the forecasted population growth. As the proposed project would facilitate VMT growth which outpaces projected population growth through the planning horizon of 2040, the proposed project would be inconsistent with the 2017 Clean Air Plan and would therefore result in a cumulatively considerable net increase in criteria air pollutants and ozone precursors, resulting in a conflict with the applicable air quality plan.
- **Cumulative Criteria Air Pollutants:** Because the proposed project would result in a projected VMT growth which outpaces the projected population growth through the planning horizon of 2040, the proposed project would result in a cumulatively considerable net increase in criteria air pollutants and ozone precursors.

5.2 - Growth-Inducing Impacts

There are two types of growth-inducing impacts that a project may have: direct and indirect. To assess the potential for growth-inducing impacts, the project's characteristics that may encourage and facilitate activities that individually or cumulatively may affect the environment must be evaluated (CEQA Guidelines § 15126.2(e)). Consistent with the CEQA Guidelines and the City's thresholds, a significant growth-inducing impact may result if the proposed project would:

- Induce substantial population growth in an area (for example, by proposing new homes and commercial or industrial businesses beyond the land use density/intensity envisioned in the General Plan);
- Substantially alter the planned location, distribution, density, or growth rate of the population of an area; or

- Include extensions of roads or other infrastructure not assumed in the General Plan or adopted capital improvements project list, when such infrastructure exceeds the needs of the project and could accommodate future developments.

Direct growth-inducing impacts occur when the development of a project imposes new burdens on a community by directly inducing population growth, or by leading to the construction of additional developments in the same area. Also included in this category are projects that remove physical obstacles to population growth (such as a new road into an undeveloped area or a wastewater treatment plant with excess capacity that could allow additional development in the service area). Construction of these types of infrastructure projects cannot be considered isolated from the development they facilitate and serve. Projects that physically remove obstacles to growth, or projects that indirectly induce growth may provide a catalyst for future unrelated development in an area such as a new residential community that requires additional commercial uses to support residents. Consistent with the State CEQA Guidelines Section 15126.2(e), it "must not be assumed that growth in any one area is necessarily beneficial, detrimental or of little significance to the environment."

South San Francisco currently has 24,647 housing units. The General Plan Update does not propose or entitle any specific development that would directly increase growth. Additionally, the General Plan Update cannot predict when any particular development would occur; however, the General Plan Update anticipates approximately 14,312 net new housing units, for a total of 38,959 housing units by 2040. A total of 40,068 new persons could be accommodated under the General Plan Update at full buildout. At buildout of the General Plan Update, the population of South San Francisco is projected to be approximately 107,203. This estimate is 34 percent greater than the Association of Bay Area Government (ABAG) estimate of 80,015 persons[1] in the City by 2040. However, full buildout may not be achieved by 2040. To provide a reasonable forecast, the City's projections are based on projects that are entitled, under review, or under construction.

South San Francisco currently provides 95,260 employment opportunities. The General Plan Update anticipates approximately 42,297 net new employment opportunities, for a total of 137,557 employment opportunities from full buildout of the General Plan Update by 2040. This estimate is 154 percent greater than the ABAG estimate of 54,230 employment opportunities[2] in the City by 2040. However, full buildout may not be achieved by 2040. To provide a reasonable forecast, the City's employment projections are based on projects that are entitled, under review, or under construction, and approved plans (e.g., the Genentech Master Plan).

The City's primary approach to accommodating growth is to locate new housing and jobs in the East of 101, Lindenville, Downtown, and El Camino planning subareas (Chapter 2, Project Description, Exhibit 2-5), which are well served by Caltrain, Bay Area Rapid Transit (BART), or SamTrans service and have good access to opportunity (such as jobs, neighborhood amenities, and health care facilities). The total amounts and differing rates of growth expected among South San Francisco's planning subareas reflect multiple policy goals, such as creating transit-oriented communities near Caltrain and BART and linking housing growth with job access. However, as detailed in Section 3.12,

[1] Association of Bay Area Governments (ABAG). 2017. Projections 2040 by Jurisdiction. Website: https://abag.ca.gov/our-work/land-use/forecasts-projections. Accessed May 18, 2022.
[2] Ibid.

Population, Housing, and Employment, the City's jobs-to-employed residents' ratio was approximately 1.46 in 2010 and 1.70 in 2019. By 2040, with buildout of the proposed project, the jobs-to-employed residents' ratio is estimated to be 2.95. As such, the City has more jobs than employable residents under current and future conditions. Therefore, under current and future conditions, it is reasonably anticipated that nonresidents would continue to fill employment positions in the City. As there is not enough housing in the City for the projected labor force, employees may need to commute to the City for employment.

CEQA Guidelines Section 15145 provides that a lead agency need not discuss an impact that is found to be too speculative for evaluation after thorough investigation. If the lead agency notes that a particular impact is too speculative, the agency should terminate the discussion while noting such conclusion. In this case, potential growth-inducing impacts is too speculative for evaluation pursuant to Section 15145 because many aspects of the underlying circumstances necessary for further analysis cannot be known or anticipated at this time. Specifically, it is too speculative at this time to identify the particular sectors for future job growth or to anticipate whether any of these positions would be virtual employment opportunities that could be filled by individuals residing in higher unemployment areas that would not have associated growth-inducing impacts. Additionally, while an increase in permanent employment demand in the City could result in an increase in population growth that may necessitate the construction of housing or other infrastructure to support the population increase in adjacent communities, and while this construction could cause physical environmental effects; it is too speculative to identify where or when this increase would occur. Because of these uncertainties, it would be too speculative for the City to identify and discuss any potential related environmental impacts as part of this Draft Program EIR pursuant to CEQA Guidelines Section 15145. Any new housing or infrastructure would be required to comply with local and State regulations as well as undergo project-level environmental review to assess environmental effects. Therefore, because the new employment opportunities in the City of South San Francisco exceed growth projections and would likely be filled by employees residing outside the City, the new employment opportunities could have growth-inducing impacts outside of the Planning Area; however, those potential impacts are too speculative to address in further detail.

Because South San Francisco is a fully built city, new development would primarily occur on parcels that already contain some existing homes or businesses, with the majority of potential growth occurring within the East of 101, Lindenville, Downtown, and El Camino planning subareas. The City is already well served by existing services (fire, police, schools, and libraries) and infrastructure (roads, freeways, railroads, transit, water, sewer, storm drainage, electricity, and natural gas). As such, implementation of the proposed project would not likely require extensions of electrical, natural gas, or water utility infrastructure beyond that which currently exists within the Planning Area. However, for undeveloped sites, future projects may require connections to existing infrastructure on or adjacent to those sites. The proposed project would not extend urban infrastructure other than to future projects within the Planning Area, and thus would not induce growth in other areas outside the City's Sphere of Influence. As such, the proposed project would not result in indirect population growth through providing an extension of infrastructure or services, or through the removal of a barrier to growth.

As discussed above, implementation of the proposed project could result in new employment opportunities could have growth-inducing impacts outside of the Planning Area; however, those potential impacts are too speculative to address in further detail. The reasonably foreseeable environmental impacts resulting from the growth envisioned by the General Plan Update are described in Chapter 3, Environmental Impact Analysis. As discussed in detail throughout Chapter 3, Environmental Impact Analysis, most of the potential environmental impacts would be avoided or lessened with the implementation of proposed General Plan Update policies, including policies related to growth management, and by implementation of mitigation measures. Therefore, by design, the proposed project reduces most of the impacts of the growth it could otherwise have induced. Those impacts that cannot be reduced to a less than significant level are described in Section 5.1, Significant Unavoidable Impacts.

5.3 - Significant Irreversible Environmental Changes

As mandated by CEQA Guidelines Section 15126.2(d), the Draft Program EIR must address significant irreversible environmental changes which would be caused by the proposed project should it be implemented. Specifically, such an irreversible environmental change would occur if:

- The proposed project would involve a large commitment of nonrenewable resources;
- Primary and secondary impacts would generally commit future generations to similar uses;
- The proposed project involves uses in which irreversible damage could result from any potential environmental accidents associated with the proposed project; or
- The proposed consumption of resources is not justified (e.g., the proposed project results in wasteful use of energy).

Development under the proposed project could result in approximately 14,312 net new housing units and approximately 42,297 net new employment opportunities within the Planning Area. Because South San Francisco is a fully built city, new development would primarily occur on parcels that already contain some existing homes or businesses, with the majority of potential growth occurring within the East of 101, Lindenville, Downtown, and El Camino planning subareas (Chapter 2, Project Description, Exhibit 2-5). Additionally, the proposed project may result in other private and public improvements throughout the City (see Chapter 2, Project Description, Sections 2.5.2, 2.5.5, and 2.5.6).

Construction of the proposed project would include the consumption of resources that are not replenishable or which may renew so slowly to be considered nonrenewable. These resources would include the following: certain types of lumber and other forest products; aggregate materials used in concrete and asphalt such as sand, gravel, and stone; metals such as steel, copper, and lead; petrochemical construction materials such as plastics; and water. Fossil fuels such as gasoline and oil would also be consumed in the use of construction vehicles and equipment. Consumption of building materials and energy is common to most other development in the region, and commitments of resources are not unique or unusual to the proposed project. Development would not be expected to involve an unusual commitment of nonrenewable resources, nor be expected to consume any resources in a wasteful manner. Energy demands associated with construction of the proposed project

are discussed in greater detail in Section 3.5, Energy, which concluded that construction-related impacts related to electricity and fuel consumption would be less than significant.

At operation, the proposed project would include the consumption of energy as part of building operations and transportation activities (vehicle trips associated with the proposed project). Fossil fuels would represent the primary energy source during operation of the proposed project, and the existing, finite supplies of these nonrenewable resources would be incrementally reduced. As discussed in Section 3.5, Energy, all new development in the City would be required to meet State energy efficiency regulations that include Title 24 Part 6 building energy efficiency standards that require new residential uses to meet a net zero energy use standard, that is met through installation of rooftop solar photovoltaics (PV) systems, enhanced insulation, and energy-efficient appliances. The Title 24 Part 6 requirements also require nonresidential buildings to be designed for increased energy efficiency standards. Other State energy efficiency regulations include Senate Bill (SB) 100 that requires 100 percent of retail sales of electricity to be generated from zero-carbon emission sources by 2045 and Executive Order N-79-20 that requires 100 percent of new passenger vehicles sold in California to be zero-emissions by 2035. In addition, compliance with the General Plan Update and Climate Action Plan policies and actions, adherence to the development standards in the South San Francisco Municipal Code and Zoning Ordinance, and compliance with State regulations, would ensure that implementation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy. These policies and actions would minimize demands for energy resources and ensure their efficient use. Furthermore, the proposed project minimizes petroleum fuel use for transportation by locating new housing and jobs in the East of 101, Lindenville, Downtown, and El Camino planning subareas, which are well served by Caltrain, BART, or SamTrans service and have good access to opportunity (such as jobs, neighborhood amenities, and health care facilities). Finally, the implementation of MM TRANS-1 in Section 3.14 Transportation, which requires the City to implement its TDM Ordinance as part of the Zoning Code Amendments and parking requirements, would reduce VMT. Thus, although the proposed project would result in an irretrievable commitment of nonrenewable resources at operation, the resources would not be consumed inefficiently, unnecessarily, or wastefully.

Implementation of the proposed project could result in an irreversible commitment of land uses from existing land uses (Chapter 2, Project Description, Exhibit 2-3) to land uses proposed under the General Plan Update (Chapter 2, Project Description, Exhibit 2-4). Therefore, future generations would be committed to similar land uses and the irreversible long-term environmental changes discussed below.

The irreversible long-term environmental changes associated with the proposed project would include an increase in local and regional vehicular traffic, and the resultant increase in air pollutants, greenhouse gas emissions, and noise generated by this traffic. The proposed project would also irreversibly increase the commitment of energy resources, potable water supply, wastewater treatment, solid waste disposal, and public services, such as providing police and fire services, to support the proposed project through its lifetime. However, features have been incorporated into the proposed project and mitigation measures are proposed in this Draft Program EIR that would minimize the significant effects of the environmental changes associated with the proposed project to the maximum degree feasible.

The proposed project may have the potential to cause significant environmental accidents through hazardous material releases into the environment by new commercial or industrial land uses. However, compliance with State law and implementation of a Storm Water Pollution Prevention Plan (SWPPP) during construction activities would ensure that future development would not create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving release of hazardous materials (see Section 3.8, Hazards and Hazardous Materials). According to California Department of Forestry and Fire Protection (CAL FIRE), the Planning Area is not located in a Fire Hazard Severity Zone (FHSZ). The Planning Area is adjacent to land identified as Moderate FHSZ within a State Responsibility Area (SRA) and High FHSZ within an SRA (San Bruno Mountain State Park). While there are no Very High, High, or Moderate FHSZs within the city limits, Sign Hill Park is susceptible to wildfires as evidenced by a fire that occurred in 2020. Land use designations in the City in the vicinity of San Bruno Mountain State Park and Sign Hill Park are not being modified under the General Plan Update (Chapter 2, Project Description, Exhibit 2-5). As a result, the degree of wildland fire hazard, including secondary hazards, would not substantially change with adoption of the General Plan Update, and current hazards would not significantly increase (see Section 3.16, Wildfire). In addition, as discussed in Section 3.13, Public Services and Recreation, existing fire protection facilities would be adequate to serve the Planning Area under the proposed project, and the proposed project would not result in a significant and unavoidable impact related to need for new or altered fire protection facilities. Thus, implementation of the proposed project would not have the potential to result in significant environmental accidents related to wildfire hazards and would not result in significant irreversible environmental changes (see Section 3.16, Wildfire).

5.4 - Substantial Effects on Human Beings

Public Resources Code Section 21083 requires lead agencies to make a finding of a “significant effect on the environment” if the environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.

Under this standard, a change to the physical environment that might otherwise be minor must be treated as significant if human beings would be significantly affected. This factor relates to adverse changes to the environment of people generally, and not to effects on particular individuals. While changes to the environment that could indirectly affect human beings would be represented by all of the designated CEQA issue areas, those that could directly affect human beings include air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, population and housing, public services, recreation, transportation/traffic, utilities, and climate change, which are addressed throughout this Draft Program EIR. No significant and unavoidable impacts were found to effect human beings, including, but not limited to sensitive receptors. Each type of impact with the potential to cause substantial adverse effects on human beings has been evaluated, and as discussed in detail in this Draft Program EIR, all of these potential impacts on human beings are either less than significant or can be mitigated to a less than significant level with the implementation of mitigation measures.

The proposed project is intended to provide policy guidance for future decision-making and does not approve or entitle any specific development. The policies discussed throughout this Draft Program

EIR are designed to promote and benefit the human environment through cohesive design. For example, the proposed project lays out strategies and actions to achieve carbon neutrality by 2045, by increasing waste diversion, reducing energy and water use, increasing resiliency across multiple sectors, and protecting and enhancing the natural environment. For all of the reasons discussed in the entire record, the proposed project would have a less than significant adverse impact on human beings.

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CHAPTER 6: EFFECTS FOUND NOT TO BE SIGNIFICANT

6.1 - Introduction

This chapter is based, in part, on the Notice of Preparation (NOP) dated January 14, 2022 and contained in Appendix A of this Draft Program Environmental Impact Report (Draft Program EIR). The NOP was prepared to identify the potentially significant effects of the proposed project. The City of South San Francisco circulated the original NOP of a Program EIR for the proposed project from February 3, 2021, to March 22, 2021, to Trustee and Responsible Agencies, the State Clearinghouse (SCH), and the public. A revised NOP was circulated from January 14, 2022, to February 28, 2022, to provide the public with an opportunity to comment on changes that were made to the Project Description related to net new housing units and net new employment opportunities anticipated under the proposed project.

6.2 - Effects Found not to be Significant

In the course of this evaluation, there was no substantial evidence of a potentially significant effect related to Agriculture and Forestry Resources or Mineral Resources.[1] Consistent with State California Environmental Quality Act (CEQA) Guidelines Section 15128, this section provides a brief description of effects found not to be significant or less than significant, based on the NOP comments or more detailed analysis conducted as part of the EIR preparation process.

6.2.1 - Agriculture and Forestry Resources

The Planning Area is located within an urban environment. No existing agriculture or forestry land use activities occur within the Planning Area boundaries, and none of the Planning Area is designated as relevant for agriculture or forestry resources by the City of South San Francisco or by the State of California.[2] The California Department of Conservation maps the project site as “Urban and Built Up” or “Other Land”; neither designation falls under the Important Farmland umbrella (Prime Farmland, Unique Farmland, and Farmland of Statewide Importance) identified in the City’s thresholds of significance. As discussed in detail in Section 3.6, Geology, Soils, and Seismicity, the United States Department of Agriculture (USDA) Soil Conservation Survey has identified Urban Land and Urban Land-Orthents as the predominant map units within the Planning Area. The Planning Area’s soils are not classified as prime soils by the USDA, a key attribute used by the California Department of Conservation in classifying farmland. The Planning Area is not encumbered by any active Williamson Act contracts, which precludes the possibility of conflicts in this regard. No impacts would occur.

[1] This Effects Found not to be Significant Chapter is limited to entire topical areas found to be less than significant. In some instances, throughout this document, specific impacts that were found to be less than significant are nonetheless included in the Draft Program EIR topical sections (Sections 3.1 through 3.16) for purposes of clarity and to facilitate the readers’ understanding of the overall environmental impact within the topical area.

[2] California Important Farmland: 1984-2018. 2018. Website: https://maps.conservation.ca.gov/dlrp/ciftimeseries/. Accessed April 30, 2022.

South San Francisco is a fully built city. There are no stands of commercially harvestable trees and, thus, the proposed project would not convert forestland to non-forest use.

Additionally, the Planning Area is designated for urban development; thus, it is considered committed to urban use for the foreseeable future. This condition precludes the possibility of the project creating pressures to convert farmland to nonagricultural use.

As such, construction and operation of the proposed project would not result in the conversion of Prime Farmland or Farmland of Statewide Importance to nonagricultural uses, nor would it conflict with any zoning for agricultural use or a Williamson Act Contract, or any zoning for forestland or timberland and would not result in loss or conversion of forestland to non-forest uses. Therefore, no impacts related to agriculture and forestry resources would occur.

6.2.2 - Mineral Resources

There are no mineral resource recovery sites within the Planning Area. The Aggregate Resource Sectors Map prepared by the California Geological Survey indicates that none of the properties within the Planning Area are owned or controlled by aggregate producers.[3] The Mineral Resource Zones map prepared by the California Geological Survey indicates that the majority of the Planning Area is located within Mineral Resource Zone (MRZ)-1, areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.[4] Sign Hill is located within MRZ-2, which includes areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.[5] Other than creating new access points to Sign Hill, which would be limited the installation of fencing and signage, no other development is proposed within Sign Hill. As such, development under the proposed project would not impact mineral deposits within MRZ-2.

Small portions of the Planning Area are located within MRZ-3 which includes areas containing mineral deposits, the significance of which cannot be evaluated, and MRZ-4, areas where available information is inadequate for assignment to any other zone. Because South San Francisco is a fully built city, new development would primarily occur on parcels that already contain some existing homes or businesses. In addition, the other private and public improvements throughout the City would be located within the urban fabric of the City. As such, construction and operation of the proposed project would not result in the loss of availability of a known mineral resource of value to the region and residents of the State. Therefore, impacts related to mineral resources would be less than significant.

[3] California Department of Conservation, California Geological Survey Information Warehouse: Mineral Land Classification. 2015. Special Report 146: Part II, Plate 2.65. Website: https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc. Accessed April 30, 2022.

[4] California Department of Conservation, California Geological Survey Information Warehouse: Mineral Land Classification. 2015. Special Report 146: Part II, Plate 2.42. Website: https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc. Accessed April 30, 2022.

[5] Ibid.

CHAPTER 7: PERSONS AND ORGANIZATIONS CONSULTED/LIST OF PREPARERS

7.1 - Public Agencies

7.1.1 - Lead Agency

City of South San Francisco Planning Division

Chief Planner / Acting ECD Director ..... Tony Rozzi, AICP
Principal Planner ..... Billy Gross, AICP
Project Administrator ..... Lisa Costa-Sanders

City of South San Francisco Fire Department

Fire Marshal ..... Ian Hardage
Fire Chief ..... Jesus Magallanes
Deputy Fire Chief ..... Matt Samson
Emergency Services Manager ..... Ken Anderson

City of South San Francisco Police Department

Master Sergeant ..... Michael Rudis
Communications and Records Manager ..... Elizabeth Kennan

City of South San Francisco Engineering Division

Senior Engineer ..... Jason Hallare

City of South San Francisco Water Quality Control Plant

Plant Superintendent ..... Brian Schumacker
Assistant Plant Superintendent ..... Nicolas Talbot
Environmental Compliance Supervisor ..... Andrew Wemmer

City of South San Francisco City Attorney's Office

City Attorney ..... Sky Woodruff
Assistant City Attorney ..... Claire Lai

City of South San Francisco Unified School District

Student Services ..... Jessen Langley

Local Agencies

North San Mateo County Sanitation District

Chief of Operations ..... Greg Krauss

7.2 - List of Preparers

7.2.1 - Lead Consultant

Raimi + Associates

Principal ..... Eric Yurkovich
Senior Planner and Designer ..... Megan McNulty, AICP
GIS Specialist and Intermediate Planner ..... Wenhao Wu
Planner and Designer ..... Michell Hernandez

7.2.2 - Technical Subconsultants

FirstCarbon Solutions

Project Director ..... Mary Bean
Project Manager ..... Lisa Davison
Environmental Services Analyst ..... Maddie Dolan
Director of Noise and Air Quality ..... Philip Ault
Air Quality Specialist ..... Lance Park
Director of Cultural Resources ..... Dana DePietro, PhD
Archaeologist ..... Stefanie Griffin
Senior Biologist ..... Bernard Warcheza
Biologist ..... Robert Carroll
Senior Editor ..... Susie Harris
Word Processor ..... Melissa Ramirez
GIS/Graphics ..... Karlee McCracken
Reprographics ..... Octavio Perez

Fehr & Peers Transportation Solutions

Associate ..... Daniel Jacobson
Senior Transportation Planner ..... Teresa Whinery
Senior Transportation Planner ..... Taylor McAdam

Urban Crossroads

Principal ..... Haseeb Qureshi
Environmental Analyst ..... Alyssa Barnett
Environmental Scientist ..... Michael Tirohn

Daly & Associates

Principal Architectural Historian ..... Pamela Daly, MSHP

Lisa Wise Consulting, Inc.

President ..... Lisa Wise
Senior Associate ..... Monica Szydlik, AICP