San Ramon 2040 General Plan

Draft Environmental Impact Report

State Clearinghouse #: 2022060549

prepared for

City of San Ramon
Planning Services Division
7000 Bollinger Canyon Road
San Ramon, California 94583
Contact: Cindy Yee, Senior Planner

prepared by

Rincon Consultants, Inc.
449 15th Street, Suite 303
Oakland, California 94612

August 30, 2023

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
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Acronyms and Abbreviations

AB	Assembly Bill
ABAG	Association of Bay Area Governments
ADU	accessory dwelling unit
AIRFA	American Indian Religious Freedom Act
AQI	Air Quality Index
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BAWSCA	Bay Area Water Supply and Conservation Agency
BERD	California State Office of Historic Preservation Built Environment Directory
BMP	best management practices
C/CAG	City/County Association of Governments
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CalGreen	California Green Building Standards Code
CalOES	California Office of Emergency Services
Cal OSHA	California Division of Occupational Safety and Health
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CCCFPD	Contra Costa County Fire Protection District
CCR	California Code of Regulations
CDF	California Department of Finance
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations

CGC	California Government Code
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CWA	Federal Clean Water Act
CWC	California Water Code
dB	Decibel
dBA	A-weighted decibel
DOC	Department of Conservation
DOF	Department of Finance
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EBMUD	East Bay Municipal Utility District
ECA	Essential Connectivity Area
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESA	Federal Endangered Species Act
ESU	evolutionary significant unit
FAR	floor area ratio
FC District	Contra Costa County Flood Control and Water Conservation District
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FMP	Fisheries Management Plans
FRA	Federal Responsibility Area
FTA	Federal Transit Administration
GHG	greenhouse gas

gpd	gallons per day
GWh	gigawatt-hours
HABS	Historic American Building Survey
HCP	Habitat Conservation Plan
HSC	Health and Safety Code
HUD	Federal Department of Housing and Urban Development
HVAC	Heating, Ventilation and Air Conditioning
in/sec	Inches per second
IPaC	Information for Planning and Conservation
IPCC	Intergovernmental Panel on Climate Change
L_{dn}	Day-Night Average Level
L_{eq}	Equivalent Noise Level
LEV	Low-Emission Vehicle
LHMP	Local Hazard Mitigation Plan
LID	Low Impact Development
LRA	Local Responsibility Area
MBTA	Migratory Bird Treaty Act
MLD	most likely descendant
MM	Mitigation Measure
MTC	Metropolitan Transportation Commission
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Communities Conservation Plan
NFPA	National Fire Protection Association
NMFS	National Marine Fisheries Service
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NWI	National Wetlands Inventory
NWIC	Northwest Information Center
OEHHA	Office of Environmental Health Hazard Assessment
OPR	California Governor's Office of Planning and Research
PG&E	Pacific Gas and Electric Company

PPM	parts per million
PQS	Professional Qualifications Standards
PRC	Public Resources Code
RTP	Regional Transportation Plan
RHNA	Regional Housing Needs Allocation
ROG	reactive organic gas
RWQCB	Regional Water Quality Control Board
RWS	Regional Water System
SB	Senate Bill
SCS	Sustainable Communities Strategy
SFO	San Francisco International Airport
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SFBAAB	San Francisco Bay Area Air Basin
SFPUC	San Francisco Public Utilities Commission
SFRWQCB	San Francisco Bay Regional Water Quality Control Board
SHMP	State of California Multi-Hazard Mitigation Plan
SLF	Sacred Lands File
SR	state route
SRA	State Responsibility Area
SSC	Species of Special Concern
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resource Control Board
TAC	toxic air contaminant
TDM	Transportation Demand Management
TIA	Transportation Impact Analysis
TNC	EV Transportation Network Company vehicles
TOD	Transit-Oriented Development
UCERF	Uniform California Earthquake Forecast
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
USEPA	United States Environmental Protection Agency
USGS	U.S. Geological Survey
VDECS	Verified Diesel Emission Control Strategies
VMT	vehicle miles traveled
VOC	volatile organic compounds
VT	vehicle trips
WOTUS	Waters of the United States
WQS	Water Quality Standards
WUI	Wildland-Urban Interface
ZEV	zero-emission vehicles

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Executive Summary

This document is an Environmental Impact Report (EIR) analyzing the environmental effects of the proposed San Ramon 2040 General Plan (proposed plan). This executive summary summarizes the characteristics of the proposed plan, EIR alternatives, and the environmental impacts and mitigation measures associated with implementation of the proposed plan.

Project Synopsis

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Project Description

This EIR has been prepared to examine the potential environmental effects of the proposed plan. The following is a summary of the full project description, which can be found in Chapter 2, *Project Description*.

As part of a comprehensive planning process, the City of San Ramon (City) proposes to adopt an update to the San Ramon General Plan, including eleven respective General Plan elements, amendment to the San Ramon Village Specific Plan, repeal of the North Camino Ramon Specific Plan, and the San Ramon Zoning Code update (collectively referred to in this EIR as the 2040 General Plan). The 2040 General Plan elements include: Land Use; Housing; Traffic and Circulation; Safety; Open Space and Conservation; Parks and Recreation; Public Facilities and Utilities; Noise, Air Quality and GHG Emissions, Growth Management, and Economic Development. The 2040 General Plan would serve as a long-term framework for future growth across the San Ramon Planning Area (the General Plan area), reflect issues identified from community input and changes in State law, and provide updates to the various elements of the General Plan.

Plan Objectives

The City of San Ramon has the following objectives for the implementation of the proposed plan.

- Outline a vision for San Ramon's long-range physical and economic development and resource conservation that reflects the aspirations of the community and the smart growth mandate of Measure G (1999);
- Provide strategies and specific implementing actions that will allow this vision to be accomplished;
- Establish a basis for judging whether specific development proposals and public projects are in harmony with Plan policies and standards;
- Allow City departments, other public agencies, and private developers to design projects that will enhance the character of the community, preserve and enhance critical environmental resources, and minimize hazards; and

- Provide the basis for establishing and setting priorities for detailed plans and implementing programs, such as the Zoning Ordinance, the Capital Improvement Program (CIP), Climate Action Plan, specific plans, etc.

Alternatives

As required by the California Environmental Quality Act (CEQA), this EIR examines alternatives to the proposed plan. Studied alternatives include the following three alternatives. Based on the alternatives analysis, Alternative 2 was determined to be the environmentally superior alternative.

- Alternative 1: Adopted General Plan Buildout ("No Project")
- Alternative 2: New Infill Mixed Use within the City Core and Additional Retail Shopping Alternative
- Alternative 3: New Infill Mixed Use within the City Core Alternative

Refer to Chapter 5.0, *Alternatives*, for the complete EIR alternatives analysis.

Areas of Known Controversy

The EIR scoping process did not identify areas of known controversy for the proposed plan. Public responses to the Notice of Preparation of a Draft EIR as well as public input received at the EIR scoping meeting held by the City are summarized in Chapter 1.0, *Introduction*.

Issues to be Resolved

There are no CEQA-related issues to be resolved at this time.

Issues Not Studied in Detail in the EIR

All environmental issue areas are analyzed in detail in this EIR.

Summary of Impacts and Mitigation Measures

Table ES-1 summarizes the environmental impacts, mitigation measures, and residual impacts (the impact after application of mitigation, if required) associated with implementation of the proposed plan. Impacts are categorized as follows:

- **Significant and Unavoidable.** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the proposed plan is approved pursuant to Section15093 of the CEQA Guidelines.
- **Less than Significant with Mitigation Incorporated.** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under Section 15091 of the CEQA Guidelines.
- **Less than Significant.** An impact that may be adverse but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- **No Impact:** The proposed plan would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

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

Impact Statement	Mitigation Measure(s)	Residual Impact
Aesthetics		
Impact AES-1. The 2040 General Plan would facilitate development in areas along urbanized corridors that do not offer notable scenic vistas through the plan area. Impacts would be less than significant.	No mitigation is required	Less than Significant
Impact AES-2. Development facilitated by the 2040 General Plan could affect scenic resources visible from a designated scenic highway. Impacts would be less than significant.	No mitigation is required	Less than Significant
Impact AES-3. The 2040 General Plan would facilitate infill and redevelopment projects within existing urban areas and allow for increased intensity of development on underutilized sites that could affect visual character or quality of views. Impacts would be less than significant.	No mitigation is required	Less than Significant
Impact AES-4. Development facilitated by the 2040 General Plan would create new sources of light or glare that could adversely affect daytime or nighttime views in the area. Compliance with the San Ramon Municipal Code and 2040 General Plan development standards related to lighting and glare would ensure this impact is less than significant.	No mitigation is required	Less than Significant
Air Quality		
Impact AQ-1. Implementation of the 2040 General Plan would be consistent with the BAAQMD 2017 Clean Air Plan. Impacts would be less than significant.	No mitigation is required	Less than Significant
Impact AQ-2. Implementation of the 2040 General Plan would result in the generation of air pollutants during construction of individual projects, which could affect local air quality. impacts would be less than significant with mitigation. Implementation of the proposed plan would not result in a cumulatively considerable net increase of operational criteria pollutants with mitigation.	**AQ-1 Reduce Construction Criteria Pollutant Emissions.** To reduce temporary increases in criteria air pollutant emissions during the construction phase for discretionary development projects that are subject to CEQA and exceed the screening sizes in the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines, the City shall require such projects to evaluate project- specific construction emissions in conformance with the BAAQMD methodology. If construction-related criteria air pollutants exceed the BAAQMD thresholds of significance, the project applicant shall mitigate the impacts to a less-than-significant level.	Less than Significant with Mitigation

Impact Statement	Mitigation Measure(s)	Residual Impact
	AQ-2 Reduce Operational Criteria Pollutant Emissions. To reduce long-term increases in air pollutants during the operation phase for discretionary development projects that are subject to CEQA and exceed the screening sizes in the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines, the City shall require such projects to evaluate project- specific operation emissions in conformance with BAAQMD CEQA Guidelines. If operation- related air pollutants exceed the BAAQMD-adopted thresholds of significance, the project applicant shall mitigate the impact to a less-than-significant level.	
Impact AQ-3. Construction activities for individual projects facilitated by the 2040 General Plan lasting longer than two months or located within 1,000 feet of sensitive receptors could expose sensitive receptors to substantial pollutant concentrations. implementation of the proposed plan may also expose sensitive receptors to additional operational sources of TACs. Impacts would be less than significant with mitigation.	**AQ-3 Conduct and Implement Construction Health Risk Assessment.** To identify and reduce potential risk exposure to nearby sensitive receivers during construction of individual projects (excluding ADUs, single-family residences, and duplexes) where construction activities would a) occur within 1,000 feet of sensitive receptors, b) last longer than two months, and c) not utilize equipment rated US EPA Tier 4 for equipment of 50 horsepower or more, construction equipment fitted with Level 3 Diesel Particulate Filters for all equipment of 50 horsepower or more, and/or alternative fuel construction equipment, the project applicant shall coordinate with the City to determine if a construction health risk assessment (HRA) shall be performed. If an HRA is to be performed, the HRA shall determine potential risk and compare the risk to the following BAAQMD thresholds: ▪ Non-compliance with Qualified Community Risk Reduction Plan; ▪ Increased cancer risk of > 10.0 in a million; ▪ Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute); or ▪ Ambient $PM_{2.5}$ increase of > 0.3 µg/m^3 annual average If risk exceeds the thresholds, measures such as requiring the use of Tier 4 engines, Level 3 Diesel Particulate Filters, and/or alternative fuel construction equipment shall be incorporated to reduce the exposure risk to acceptable levels. **AQ-4 Reduce Operational Toxic Air Contaminants.** To identify and reduce potential risk exposure to nearby sensitive receivers during the operation phase for discretionary development projects that are subject to CEQA and exceed the screening sizes in the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines, the City shall require applicants for commercial land uses that would generate substantial diesel truck travel (i.e., 100 diesel trucks per day or 40 or more trucks with diesel-powered transport refrigeration units per day) to contact BAAQMD to determine the appropriate level of operational health risk assessment (HRA) required. If required, the operational HRA shall be prepared in accordance with the Office of Environmental Health Hazard Assessment and BAAQMD requirements and include mitigation to reduce the exposure risk to an acceptable level. Typical measures to reduce risk impacts may include, but are not limited to:	Less than Significant with Mitigation

Impact Statement	Mitigation Measure(s)	Residual Impact
	a. Restricting idling on-site beyond Air Toxic Control Measures idling restrictions, as feasible. b. Electrifying warehousing docks. c. Truck Electric Vehicle (EV) Capable trailer spaces. d. Requiring use of newer equipment and/or vehicles. e. Restricting off-site truck travel through the creation of truck routes.	
Impact AQ-4. The 2040 General Plan could create objectionable odors that could adversely affect a substantial number of people. Impacts related to odors would be less than significant.	No mitigation is required	Less than Significant
Biological, Agricultural, and Forestry Resources		
Impact BIO-1. Development facilitated by the 2040 General Plan could result in direct or indirect impacts to special-status species or their associated habitats including impacts to migratory bird nest sites. Impacts would be less than significant with mitigation incorporated.	**BIO-1 Conduct Pre-Construction Bird Surveys and Implement Avoidance and Minimization Measures.** For construction activities initiated during the bird nesting season (February 1 – September 15) involving removal of vegetation that could potentially serve as habitat for special-status bird species or other nesting bird habitat, including abandoned structures and other man-made features, a pre-construction nesting bird survey shall be conducted no more than 14 days prior to initiation of ground disturbance and vegetation removal activities. The nesting bird pre-construction survey shall be conducted on foot and shall include a buffer around the construction site at a distance determined by a qualified biologist. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in California Bay Area communities (i.e., qualified biologist). If nests are found, an avoidance buffer shall be determined by a qualified biologist dependent upon the species, the proposed work activity, and existing disturbances associated with land uses outside of the site. The buffer shall be demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to demarcate the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No ground disturbing activities shall occur within the buffer until the biologist has confirmed that breeding/nesting is completed, and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist on the basis that the encroachment will not be detrimental to an active nest. A report summarizing the pre-construction survey(s) shall be prepared by a qualified biologist and shall be submitted to the City prior to the commencement of construction activities. Future project site plans shall include a statement acknowledging compliance with the federal MBTA and California Fish and Game Code that includes avoidance of active bird nests and identification of Best Management Practices to avoid impacts to active nests,	Less than Significant with Mitigation

Impact Statement	Mitigation Measure(s)	Residual Impact
	including checking for nests prior to construction activities during February 1 to September 15 and what to do if an active nest is found so that the nest is not inadvertently impacted during grading or construction activities. **BIO-2 Conduct Pre-Construction Roosting Bats Surveys and Implement Avoidance Measures Prior to Removal.** Prior to the removal or alteration of trees and structures that may serve as roosting habitat for special-status bat species, a qualified biologist shall conduct a focused survey of all trees and structures to be removed or impacted by construction activities to determine whether active roosts of special-status bats are present on site. The survey shall be conducted during seasonal periods of bat activity (March 1 through October 15). The biologist shall have access to all structures and interior attics, as needed. If a colony of bats is found roosting in any structure, tree or other habitat, further surveys, such as night emergent surveys, shall be conducted sufficient to determine the species present and the type of roost (day, night, maternity, etc.). Tree or structure removal shall be planned for either the spring or the fall and timed to ensure both suitable conditions for the detection of bats and adequate time for tree and/or structure removal to occur during seasonal periods of bat activity exclusive of the breeding season, as described below. Trees and/or structures containing suitable potential bat roost habitat features shall be clearly marked or identified. If no bat roosts are found, the results of the survey will be documented and submitted to the City within 30 days of the survey, after which no further action will be required. If day roosts are present, the biologist shall prepare a site-specific roosting bat protection plan to be implemented by the contractor following the City's approval. The plan shall incorporate the following guidance as appropriate: ▪ When possible, removal of trees/structures identified as suitable roosting habitat shall be conducted during seasonal periods of bat activity, including the following: a) Between September 1 and about October 15, or before evening temperatures fall below 45 degrees Fahrenheit and/or more than 0.5 inch of rainfall within 24 hours occurs. b) Between March 1 and April 15, or after evening temperatures rise above 45 degrees Fahrenheit and/or no more than 0.5 inch of rainfall within 24 hours occurs. ▪ If a tree /structure must be removed during the maternity season and is identified as potentially containing a colonial maternity roost, then a qualified biologist shall conduct acoustic emergence surveys or implement other appropriate methods to further evaluate if the roost is an active maternity roost. Under the biologist's guidance, the contractor shall implement measures that consist of (or exceed) the following:	

Impact Statement	Mitigation Measure(s)	Residual Impact
	a) If it is determined that the roost is not an active maternity roost, then the roost may be removed in accordance with the other requirements of this measure. b) If it is found that an active maternity roost of a colonial roosting species is present, the roost shall not be disturbed during the maternity season (April 15 to August 31) or until the maternity roost has dispersed. ▪ Tree removal procedures shall be implemented using a two-step tree removal process. This method is conducted over two consecutive days and works by creating noise and vibration by cutting non-habitat branches and limbs from habitat trees using chainsaws only (no excavators or other heavy machinery) on day one. The noise and vibration disturbance, together with the visible alteration of the tree, is very effective in causing bats that emerge nightly to feed to not return to the roost that night. The remainder of the tree is removed on day two. ▪ Prior to the demolition of vacant structures within the project site, a qualified biologist shall conduct a focused habitat assessment of all structures to be demolished. The habitat assessment shall be conducted enough in advance to ensure the commencement of building demolition can be scheduled during seasonal periods of bat activity (see above), if required. If no signs of day roosting activity are observed, no further actions will be required. If bats or signs of day roosting by bats are observed, a qualified biologist will prepare specific recommendations such as partial dismantling to cause bats to abandon the roost, or humane eviction, both to be conducted during seasonal periods of bat activity, if required. Should maternity roosts be observed the roost shall not be disturbed during the maternity season (April 15 to August 31) or until maternity roost has dispersed. If project schedules do not allow for maternity season avoidance, a bat habitat mitigation and monitoring plan shall be developed to reduce risks to bat pups and consultation with CDFW would be required. ▪ If the qualified biologist determines a roost is used by a large number of bats (large hibernaculum), bat boxes shall be installed near the project site. The number of bat boxes installed will depend on the size of the hibernaculum and shall be determined through consultation with CDFW. If a maternity colony has become established, all construction activities shall be postponed within a 500-foot buffer around the maternity colony until it is determined by a qualified biologist that the young have dispersed. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately.	

Impact Statement	Mitigation Measure(s)	Residual Impact
Impact BIO-2. Development facilitated by the 2040 General Plan could adversely impact riparian habitat, other sensitive natural communities, or protected wetlands in the General Plan area. Implementation of federal, State, and local regulations and policies would ensure riparian habitat and wetlands are not significantly impacted. Impacts would be less than significant.	No mitigation is required.	Less than Significant
Impact BIO-3. Development facilitated by the 2040 General Plan would avoid impacts to wildlife movement corridors by conserving Open Space areas in the General Plan area, as directed by policies in the 2040 General Plan. Impacts would be less than significant.	No mitigation is required.	Less than Significant
Impact BIO-4. Development facilitated by the 2040 General Plan would be required to conform with applicable local policies and ordinances protecting biological resources. Impacts would be less than significant.	No mitigation is required.	Less than Significant
Impact BIO-5. Development facilitated by the 2040 General Plan would not conflict with an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan. No impact would occur.	No mitigation is required.	No Impact
Impact BIO-6. Development facilitated by the 2040 General Plan would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use. Impacts would be less than significant.	No mitigation is required.	Less than Significant
Impact BIO-7. Development facilitated by the 2040 General Plan would not conflict with existing zoning for agricultural use or a Williamson Act contract. Impacts would be less than significant.	No mitigation is required.	Less than Significant
Impact BIO-8. Development facilitated by the 2040 General Plan would not result in the conversion of land used for forestry purposes nor conflict with existing zoning for forestry or timberland use. No impact would occur.	No mitigation is required.	No Impact

Impact Statement	Mitigation Measure(s)	Residual Impact
Cultural and Tribal Cultural Resources		
Impact CR-1. The 2040 General Plan has the potential to result in significant impacts if development carried out under the plan would cause a substantial adverse change in the significance of a historical resource. this impact would be less than significant with mitigation.	**CR-1 Prepare a Historical Resources Evaluation Prior to Approval for Projects Involving Buildings 45 Years or Older and Implement Mitigation Prior to and During Construction.** A historic resources evaluation for projects involving buildings 45 years or older shall be prepared as follows: ▪ The evaluation shall be prepared by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualifications Standards in architectural history or history (as defined in Code of Federal Regulations, Title 36, Part 61). The qualified architectural historian or historian shall conduct an intensive-level evaluation in accordance with the guidelines and best practices promulgated by the State Office of Historic Preservation to identify potential historical resources within the proposed development site. All properties 45 years of age or older as deemed appropriate by the San Ramon Community Development Director shall be evaluated within their historic context and documented in a report meeting the State Office of Historic Preservation guidelines. Such evaluated properties shall be documented on Department of Parks and Recreation Series 523 Forms. The report shall be submitted to the City for review and concurrence. If the property is already listed in the NRHP or CRHR, the historical resources evaluation described above shall not be required. ▪ If historical resources are identified within the site of a proposed development, efforts shall be made to the extent feasible to ensure that impacts are mitigated. Application of mitigation shall generally be overseen by a qualified architectural historian or historic architect meeting the Professional Qualification Standards, unless unnecessary in the circumstances (e.g., preservation in place). In conjunction with a development application that may affect the historical resource, the historical resources evaluation report shall also identify and specify the treatment of character-defining features and construction activities. ▪ Efforts shall be made to the greatest extent feasible to ensure that the relocation, rehabilitation, or alteration of the resource is consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. Application of the Standards shall be overseen by a qualified architectural historian or historic architect meeting the Professional Qualification Standards. In conjunction with a development application that may affect the historical resource, a report identifying and specifying the treatment of character-defining features and construction activities shall be provided to the City for review and concurrence. As applicable, the report shall demonstrate how a project complies with the Standards and be submitted to the City for review and approval prior to the issuance of permits.	Less than Significant

Impact Statement	Mitigation Measure(s)	Residual Impact
	▪ If significant historical resources are identified on a development site and compliance with the Standards and or avoidance is not possible, appropriate site-specific mitigation measures shall be established and undertaken. Mitigation measures may include documentation of the historical resource in the form of a Historic American Building Survey (HABS) report, or equivalent. The report shall comply with the Secretary of the Interior's Standards for Architectural and Engineering Documentation and shall generally follow the HABS Level III requirements, including digital photographic recordation, detailed historic narrative report, and compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the Professional Qualification Standards and submitted to the City prior to issuance of any permits for demolition or alteration of the historical resource.	
Impact CR-2. The 2040 general Plan has the potential to result in significant impacts if development carried out under the plan would cause a substantial adverse change in the significance of an archaeological resource, including those that qualify as historical resources. This impact would be less than significant with mitigation.	**CR-2 Prepare an Archaeological Resources Assessment prior to Project Approval and Implement Mitigation prior to and during Construction.** An archaeological resources assessment for projects involving ground disturbance shall be prepared as follows: ▪ Assessments shall include a California Historical Resources Information System records search at the Northwest Information Center (NAHC) and a Sacred Lands File search maintained by the Native American Heritage Commission. The records searches will characterize the results of previous cultural resource surveys and disclose any cultural resources that have been recorded and/or evaluated in and around a project site. A Phase I pedestrian survey shall be undertaken at a project site that is on previously undeveloped land in order to locate any surface cultural materials. By performing a records search, consultation with the NAHC, and a Phase I survey, a qualified archaeologist shall be able to classify a project site as having high, medium, or low sensitivity for archaeological resources. ▪ If the Phase I archaeological survey identifies resources that may be affected by a project, the archaeological resources assessment shall also include Phase II testing and evaluation. If resources are determined significant or unique through Phase II testing and site avoidance is not possible, appropriate site-specific mitigation measures shall be identified in the Phase II evaluation. These measures shall include, but would not be limited to, a Phase III data recovery program, avoidance, or other appropriate actions to be determined by a qualified archaeologist in consultation with the City and any interested Tribes, as stated in the 2040 General Plan Tribal Consultation Implementation Program outlined by Guiding Policy ENV-5. If significant archaeological resources cannot be avoided, impacts may be reduced to less-than-significant levels by adding fill soils on top of the sites rather than cutting into cultural deposits. Alternatively, and/or in addition, a data collection program may be warranted, including mapping the location of artifacts, surface collection of artifacts, or excavation of the cultural deposit to characterize the nature of the buried portions of sites. Curation of	Less than Significant with Mitigation

Impact Statement	Mitigation Measure(s)	Residual Impact
	the excavated artifacts or samples shall occur as specified by the archaeologist in consultation with the City and any interested Tribes. As stated in the 2040 General Plan Tribal Consultation Implementation Program outlined by Guiding Policy ENV-5, the final disposition of artifacts not directly associated with Native American graves shall be negotiated during consultation with interested tribes. If Native American tribes do not accept the artifact, it shall be offered to an institution staffed by qualified professionals, as determined by the City Planner. Artifacts include material recovered from all phases of work, including the initial survey, testing, indexing, data recovery, and monitoring. **CR-3 Stop Work in the Event of Unanticipated Cultural Resources Discoveries during Construction.** If cultural resources are encountered during ground-disturbing activities for a project, work in the immediate area shall be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology in either prehistoric or historic archaeology shall be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by a project, additional work such as excavating the cultural deposit to fully characterize its extent, and collecting and curating artifacts may be warranted to mitigate any significant impacts to cultural resources. In the event that archaeological resources of Native American origin are identified during project construction, a qualified archaeologist will consult with the City to begin Native American consultation procedures.	
Impact CR-3. The discovery of human remains is always a possibility during ground-disturbing activities. Ground disturbance associated with development carried out under the 2040 General Plan may disturb or damage known or unknown human remains. This impact would be less than significant with adherence to existing regulations.	No mitigation is required.	Less than Significant

Impact Statement	Mitigation Measure(s)	Residual Impact
Impact CR-4. Development facilitated by the 2040 general plan has the potential to impact unidentified tribal cultural resources. Impacts would be less than significant with mitigation.	**CR-4 Suspend Work around Tribal Cultural Resources Identified during Construction.** In the event that cultural resources of Native American origin are identified during construction of a project implemented under the 2040 General Plan, all earth-disturbing work in the vicinity of the find shall be temporarily suspended or redirected until an archaeologist has evaluated the nature and significance of the find as a cultural resource and an appropriate local Native American representative is consulted. If the City, in consultation with local Native Americans, determines that the resource is a tribal cultural resource and, thus, significant under CEQA, a mitigation plan shall be prepared and implemented in accordance with State guidelines and in consultation with local Native American group(s). The mitigation plan shall include avoidance of the resource or, if avoidance of the resource is infeasible, the plan shall outline the appropriate treatment of the resource in coordination with the appropriate local Native American tribal representative and, if applicable, a qualified archaeologist. Examples of appropriate mitigation for tribal cultural resources include, but are not limited to, protecting the cultural character and integrity of the resource, protecting traditional use of the resource, protecting the confidentiality of the resource, or heritage recovery.	Less than Significant with Mitigation
Geology/Soils and Mineral Resources		
Impact GEO-1. The 2040 General Plan is located within an Alquist Priolo Earthquake Fault Zone, and, therefore, the proposed plan would likely be subject to effects involving rupture of a known earthquake fault. Implementation of proposed general plan policies and existing state and local regulations would reduce seismic hazards to less than significant.	No mitigation is required.	Less than Significant
Impact GEO-2. Development facilitated by the proposed plan could result in exposure of people or structures to a risk of loss, injury, or death from seismic events. Development facilitated by the proposed plan could be located on a geologic unit or soil that is unstable or could become unstable resulting in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. However, with compliance with applicable laws, regulations, and applicable General Plan Goals and Policies, this impact would be less than significant.	No mitigation is required.	Less than Significant

Impact Statement	Mitigation Measure(s)	Residual Impact
Impact GEO-3. Construction facilitated by the 2040 General Plan would include ground disturbance such as excavation and grading that would result in loose or exposed soil. Disturbed soil could be eroded by wind or rain during a storm event, which could result in the loss of topsoil. Adherence to existing regulatory requirements would ensure that this impact would be less than significant.	No mitigation is required.	Less than Significant
Impact GEO-4. Future seismic events could result in liquefaction and lateral spreading of soils within the city. Development in the General Plan area could be subject to liquefaction hazards. Compliance with the CBC would reduce liquefaction hazards. Proposed Health, Safety, and HazMat goals and policies apply to development facilitated by the proposed plan in hazard zones for liquefaction or lateral spreading of soils. Impacts would be less than significant.	No mitigation is required.	Less than Significant
Impact GEO-5. Development facilitated by the 2040 General Plan would occur on urbanized sites that are served by existing sanitation infrastructure. New development would not include septic systems. There would be no impact .	No mitigation is required.	No Impact
Impact GEO-6. Development facilitated by the 2040 General Plan has the potential to impact paleontological resources. Impacts would be less than significant with mitigation incorporated.	**GEO-1 Protect Paleontological Resources.** The City of San Ramon shall provide for the protection of paleontological resources. The City shall require the following: ▪ A Qualified Professional Paleontologist (as defined by SVP[14]) must be retained to conduct a paleontological resources analysis prior to the beginning of projects involving ground disturbance in geologic units with high paleontological sensitivity to determine whether there is a potential for significant impacts to paleontological resources. ▪ If potential impacts to paleontological resources are found to be significant, then a Qualified Professional Paleontologist shall be retained to develop and implement a Paleontological Resources Mitigation Program to ensure that impacts to paleontological resources are less than significant.	Less than Significant
Impact GEO-7. Development facilitated by the 2040 General Plan would not have the potential to impact mineral resources. There would be no impact.	No mitigation is required.	No Impact

Impact Statement	Mitigation Measure(s)	Residual Impact
Greenhous Gas Emissions and Energy		
Impact GHG-1. San Ramon does not have a Climate Action Plan that includes targets to meet State 2030 and 2045 goals. Therefore, implementation of the 2040 General Plan would not meet State 2030 and 2045 goals. Mitigation Measure GHG-1 would result in adoption of San Ramon CEQA GHG thresholds and a Climate Action Plan. this impact would be less than significant with mitigation.	**GHG-1 Adopt and Implement a San Ramon Qualified Climate Action Plan and San Ramon CEQA GHG Emissions Thresholds.** The City shall adopt an updated San Ramon Climate Action Plan by the end of 2024 and include targets that reflect those set by SB 32 to reduce GHG emissions by 40 percent below the 1990 levels by 2030 and AB 1279 to achieve carbon neutrality by 2045. Implementation measures in an updated Climate Action Plan to achieve the 2030 and 2045 targets shall include, but are not limited to, the following: ▪ Develop and adopt Zero Net Energy requirements for new and remodeled residential and non-residential development; ▪ Develop and adopt a building electrification ordinance for existing and proposed structures; ▪ Expand charging infrastructure and parking for electric vehicles; ▪ Implement carbon sequestration by expanding the urban forest, participating in soil-based or compost application sequestration initiatives, supporting regional open space protection, and/or incentivizing rooftop gardens; and ▪ Implement policies and measures included in the 2022 California Climate Change Scoping Plan, such as mobile source strategies for increasing clean transit options and zero emissions vehicles by providing electric vehicle charging stations. The City shall also adopt San Ramon CEQA GHG Emissions Thresholds of Significance that are consistent with an updated San Ramon Climate Action Plan by the end of 2024 for use in future CEQA GHG emissions analyses through 2030 and consistent with SB 32. In addition, upon completion of future climate action plan updates and as necessary, the City shall update the CEQA GHG emissions thresholds of significance to be consistent with each climate action plan update.	Less than Significant
Impact GHG-2. The 2040 General Plan would implement a land-use strategy and policies that would promote greater overall energy efficiency. Wasteful, inefficient, or unnecessary consumption of energy would not occur. impacts would be less than significant.	No mitigation is required.	Less than Significant

Impact Statement	Mitigation Measure(s)	Residual Impact
Impact GHG-3. The 2040 General Plan would be consistent with applicable energy efficiency goals and regulations included in relevant provisions of CALGreen (Title 24, Part 11). However, San Ramon has not adopted the California Building Energy Efficiency Standards (Title 24, Part 6). Development facilitated by the 2040 General Plan would not be consistent with State energy efficiency plans until Title 24, Part 6 is adopted by San Ramon. this impact would be less than significant with mitigation.	No mitigation is required.	Less than Significant
Hazards/Hazardous Materials and Wildfire		
Impact HAZ-1. Development facilitated by the 2040 General Plan could result in the release of potentially hazardous materials, which may occur within 0.25 mile of a school. However, compliance with local, regional, State, and federal regulations related to hazardous materials would minimize the risk of releases and exposure to these materials. Impacts would be less than significant.	No mitigation is required.	Less than Significant
Impact HAZ-2. Development facilitated by the 2040 General Plan could result in development on sites contaminated with hazardous materials. However, compliance with applicable regulations relating to site remediation would minimize impacts from development on contaminated sites, resulting in a less than significant impact.	No mitigation is required.	Less than Significant
Impact HAZ-3. Development facilitated by the 2040 General Plan would not be located within an airport land use plan or within two miles of an airport. No impacts would occur. .	No mitigation is required.	No Impact

Impact Statement	Mitigation Measure(s)	Residual Impact
Impact HAZ-4. Development facilitated by the 2040 General Plan would result in additional population and vehicle miles traveled in the city. The proposed plan could result in changes to emergency evacuation routes or would substantially increase roadway congestion such that the use of an evacuation route would be hindered. Adherence to existing hazard mitigation plans and evacuation plans would reduce risk of hindering evacuation route use. impacts would be less than significant.	No mitigation is required	Less than Significant
Impact HAZ-5. San Ramon is not located within or near a Very High Fire Hazard Severity Zone or State Responsibility area; however, portions of San Ramon are located in and near a High Fire Hazard Severity Zone, a Local Responsibility area, and areas of vegetated open space. Mitigation and compliance with applicable codes and regulations would reduce the risk of loss, injury, or death from wildfire. Impacts would be less than significant with mitigation.	**HAZ-1 Conduct Project Landscape and Slope Design Wildfire Risk Reduction.** The City shall require projects adjacent to High Fire Hazard Zones to conduct landscape and slope design wildfire risk reduction. Project landscape plans (as made available when project applications are submitted) shall include fire-resistant vegetation native to Contra Costa County and/or the local microclimate of the site and prohibit the use of fire-prone species especially non-native, invasive species. Also, if a project site is within a known landslide area (see Figure 3.5-5 in Section 3.5, *Geology and Soils*), the site shall be subject to geotechnical review regarding potential post-fire slope instability.	Less than Significant
Hydrology and Water Quality		
Impact HYD-1. Implementation of the 2040 General Plan would involve ground-disturbing activities during construction that could temporarily increase the potential for water quality to be affected by sedimentation or an accidental spill or release of hazardous materials. However, with adherence to applicable water quality standards, waste discharge requirements, and proposed General Plan policies, impacts would be less than significant.	No mitigation is required.	Less than Significant
Impact HYD-2. Development facilitated by the 2040 General Plan would not pump water from the local groundwater basin and would not introduce substantial new areas of impermeable surfaces such that the rates or patterns of groundwater recharge from infiltration would be affected. Impacts would be less than significant.	No mitigation is required.	Less than Significant

Impact Statement	Mitigation Measure(s)	Residual Impact
Impact HYD-3. Development facilitated by the 2040 General Plan would not alter the course of a stream or river or substantially alter existing drainage patterns, including through new impervious surfaces, and regulatory requirements as well as policies to protect and improve drainage patterns would minimize erosion, flooding, and runoff. Impacts would be less than significant.	No mitigation is required.	Less than Significant
Impact HYD-4. Development facilitated by the 2040 General Plan would not increase existing potential for inundation within flood hazard areas to occur and would not introduce substantial new pollutant sources that could potentially be released due to inundation. Impacts would be less than significant.	No mitigation is required.	Less than Significant
Impact HYD-5. Development facilitated by the 2040 General Plan would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.	No mitigation is required.	Less than Significant
Land Use/Planning and Population/Housing		
Impact LU-1. Implementation of the proposed 2040 General Plan would maintain orderly development in San Ramon and would not physically divide an established community. Impacts would be less than significant.	No mitigation is required.	Less than Significant
Impact LU-2. Implementation of the 2040 General Plan would be generally consistent with applicable land use plans, policies, or regulations adopted to avoid or mitigate environmental effects, such as the SRVSP and ABAG/MTC Plan Bay Area 2050. Impacts would be less than significant.	No mitigation is required.	Less than Significant

Impact Statement	Mitigation Measure(s)	Residual Impact
Impact LU-3. Implementation of the proposed plan would facilitate the construction of new housing in San Ramon. Proposed development could result in an increase in population that would exceed ABAG population forecasts by 35 percent by 2040. However, the proposed plan is intended to accommodate and plan for population growth. Impacts would be less than significant.	No mitigation is required.	Less than Significant
Impact LU-4. Development facilitated by the proposed plan would not result in the displacement of substantial numbers of housing or people. The proposed plan would facilitate the development of new housing in accordance with State and local housing requirements, while preserving existing residential neighborhoods. Impacts would be less than significant.	No mitigation is required.	Less than Significant
Noise		
Impact NOI-1. Construction of individual projects facilitated by the 2040 General Plan would temporarily increase noise levels, potentially affecting nearby noise-sensitive land uses. Development facilitated by the 2040 General Plan would also introduce new noise sources and contribute to increases in operational noise. The continued regulation of noise, consistent with the City Code, implementation of proposed 2040 General Plan policies, and identified mitigation would minimize disturbance to adjacent land uses. impacts would be less than significant with mitigation.	**NOI-1 Include and Implement Construction Noise Reduction Measures.** To minimize noise during construction, construction contractors shall implement the following measures for construction activities conducted within the City. Construction plans submitted to the City shall include construction noise analysis and identify these measures on demolition, grading, and construction plans submitted to the City. The City of San Ramon Building Division shall verify that grading, demolition, and/or construction plans submitted to the City include these notations prior to issuance of demolition, grading and/or building permits. ▪ **Mufflers.** During excavation and grading construction phases, all construction equipment, fixed or mobile, shall be operated with closed engine doors and shall be equipped with properly operating and maintained mufflers consistent with manufacturers' standards. ▪ **Stationary Equipment.** All stationary construction equipment shall be placed so that emitted noise is directed away from the nearest sensitive receivers. ▪ **Equipment Staging Areas.** Equipment staging shall be located in areas that will create the greatest distance feasible between construction-related noise sources and noise-sensitive receivers.	Less than Significant

Impact Statement	Mitigation Measure(s)	Residual Impact
	▪ **Smart Back-up Alarms.** Mobile construction equipment shall have smart back-up alarms that automatically adjust the sound level of the alarm in response to ambient noise levels. Alternatively, back-up alarms shall be disabled and replaced with human spotters to ensure safety when mobile construction equipment is moving in the reverse direction in compliance with applicable safety laws and regulations. ▪ **Electrically-Powered Tools and Facilities.** Electrical power shall be used to run air compressors and similar power tools and to power any temporary structures, such as construction trailers or caretaker facilities, where feasible. ▪ **Noise Disturbance Coordinator**. The project applicant shall designate a "noise disturbance coordinator" responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of any noise complaint and shall require that reasonable measures be implemented to correct the problem. A telephone number for the disturbance coordinator and the City shall be posted at the construction site. ▪ **Temporary Noise Barriers.** Erect temporary noise barriers, where feasible, when construction noise is predicted to exceed the acceptable standards (e.g., 80 dBA L_{eq} at residential receivers, schools or other sensitive receptors during the daytime) and when the anticipated construction duration is greater than is typical (e.g., two years or greater). Temporary noise barriers shall be constructed with solid materials (e.g., wood) with a density of at least 1.5 pounds per square foot with no gaps from the ground to the top of the barrier. If a sound blanket is used, barriers shall be constructed with solid material with a density of at least 1 pound per square foot with no gaps from the ground to the top of the barrier and be lined on the construction side with acoustical blanket, curtain or equivalent absorptive material rated sound transmission class (STC) 32 or higher. **NOI-2 Implement Operational Roadway Vehicle Noise Reduction Measures.** To reduce operational roadway vehicle noise, the City shall implement a developer fair share mitigation program to fund the following measures for projects operated on the following roadway segments within the City: Dougherty Boulevard between Bollinger Canyon Road (north) and Bollinger Canyon Road (South), San Ramon Valley Boulevard between the northern City limit and Crow Canyon Road, Camino Ramon between Crow Canyon Road and Norris Canyon Road, and Camino Ramon between Norris Canyon Road and Bollinger Canyon Road. The City shall retain a qualified acoustical consultant to prepare a San Ramon-wide Roadway Vehicle Noise Reduction Study that specifies, at a minimum, the specific locations, extent, height of sound walls, and other design details such as "quiet pavement" to reduce roadway vehicle noise impacts at impacted roadways throughout San Ramon. The study shall also include an estimated cost of improvement along each	

Impact Statement	Mitigation Measure(s)	Residual Impact
	impacted roadway segment to inform the developer fair share mitigation program. Roadway vehicle noise reduction measures may include, but are not limited to: A. **Sound Barrier Walls.** The City shall construct sound barriers (e.g., walls or solid fences) along impacted roadways where there are no driveways that would break continuity, and along the residential portions or other sensitive receptor locations of such roadways. The sound walls would be continuous from grade to top, with no cracks or gaps, and have a minimum surface density of four pounds per square foot and a minimum height of six feet, as measured from the base elevation; and/or B. **Special Roadway Paving.** The City shall install "quiet pavement" roadway improvements, such as rubberized asphalt or open-grade asphalt concrete overlays along impacted roadway segments (Dougherty Boulevard between Bollinger Canyon Road (north) and Bollinger Canyon Road (South), San Ramon Valley Boulevard between the City limit and Crow Canyon Road, Camino Ramon between Crow Canyon Road and Norris Canyon Road, and Camino Ramon between Norris Canyon Road and Bollinger Canyon Road) where sound barriers (NOI-2A) are determined not to be feasible.	
Impact NOI-2. Construction of individual projects facilitated by the 2040 General Plan would temporarily generate groundborne vibration and noise, potentially affecting nearby land uses. Operation of development facilitated by the 2040 General Plan would not result in substantial groundborne vibration and noise. This impact would be less than significant with mitigation.	**NOI-3 Prepare a Noise and Vibration Analysis and Implement Construction Vibration Control Measures and Screening Distances.** Prior to issuance of a building permit for a project requiring pile driving during construction within 135 feet of fragile structures such as historical resources, 100 feet of non-engineered timber and masonry buildings (e.g., most residential buildings), or within 75 feet of engineered concrete and masonry (no plaster); a vibratory roller within 40 feet of fragile historical resources or 25 feet of any other structure; or a dozer or other large earthmoving equipment within 20 feet for a fragile historical structure or 15 feet of any other structure, the project applicant shall prepare a groundborne noise and vibration analysis to assess and mitigate potential noise and vibration impacts related to these construction activities. This noise and vibration analysis shall be conducted by a qualified and experienced acoustical consultant or engineer. The vibration levels shall not exceed FTA architectural damage thresholds (e.g., 0.12 in/sec PPV for fragile or historical resources, 0.2 in/sec PPV for non-engineered timber and masonry buildings, and 0.3 in/sec PPV for engineered concrete and masonry). If vibration levels would exceed this threshold, alternative uses such as drilling piles as opposed to pile driving, static rollers as opposed to vibratory rollers, and lower horsepower earthmoving equipment shall be used. If necessary, construction vibration monitoring shall be conducted to ensure FTA vibration thresholds are not exceeded.	Less than Significant

Impact Statement	Mitigation Measure(s)	Residual Impact
Impact NOI-3. Development facilitated by the 2040 General Plan would not expose people residing or working in the plan area to excessive noise levels related to airstrip/airport operation. There would be no impact.	No mitigation is required.	Less than Significant
Public Services & Recreation		
Impact PS-1. Development facilitated by the 2040 General Plan would increase the population of San Ramon, generating additional need for fire protection services. However, compliance with the 2040 General Plan would result in impacts related to the need for new or altered fire facilities that are less than significant.	No mitigation is required.	Less than Significant
Impact PS-2. Development facilitated by the 2040 General Plan would increase population in San Ramon, generating additional need for police protection services. However, compliance with 2040 General Plan policies would result in impacts related to the need for new or altered police facilities that are less than significant.	No mitigation is required.	Less than Significant
Impact PS-3. Development facilitated by the 2040 General Plan would result in an increase in population of school-aged children in San Ramon. This would increase demand for school services and potentially create the need for new school facilities. Operational impacts of new school facilities would be less than significant with payment of school impact fees.	No mitigation is required.	Less than Significant
Impact PS-4. Development facilitated by the 2040 General Plan would result in an increase in San Ramon population. This would increase demand for and use of parks and potentially create the need for new or altered park and recreational facilities. However, compliance with 2040 General Plan policies would result in impacts related to increased use or the need for new or altered parks or recreational facilities that are less than significant.	No mitigation is required.	Less than Significant

Impact Statement	Mitigation Measure(s)	Residual Impact
Impact PS-5. Development facilitated by the 2040 General Plan would result in an increase in the City's population. This would increase demand for public facilities, specifically libraries, and potentially create the need for new libraries. However, compliance with 2040 General Plan policies would result in impacts related to need for new or altered public facilities that are less than significant.	No mitigation is required.	Less than Significant
Transportation and Traffic		
Impact TRA-1. Implementation of the 2040 General Plan could conflict with a program, plan, ordinance, or policy addressing the circulation system, including roadway, transit, bicycle, and pedestrian facilities during construction. However, operational impacts would not conflict with policies addressing the circulation system. impacts would be less than significant with mitigation.	**TRA-1 Prepare and Implement Construction Traffic Management Plans.** Prior to issuance of building permits, the contractor for an individual development project that requires off-site staging, lane closures, or substantial hauling of cut and fill on a local street (i.e., not under Caltrans' jurisdiction) shall prepare a Construction Traffic Management Plan that includes measures such as, but not limited to, the following as deemed necessary by the City. The approved Construction Traffic Management Plan shall be implemented during construction. ▪ Provide a temporary traffic signal, if necessary ▪ Project Staging Plan to maximize on-site storage of materials and equipment ▪ A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak-hours; lane closure proceedings; signs, cones, and other warning devices for drivers; and designation of construction access routes ▪ Permitted construction hours ▪ Location of construction staging ▪ Identification of parking areas for construction employees, site visitors, and inspectors, including on-site locations ▪ Provisions for street sweeping to remove construction related debris on public streets	Less than Significant
Impact TRA-2. Implementation of the 2040 General Plan would conflict or be inconsistent with *CEQA Guidelines* Section 15064.3, subdivision (b). impacts would be significant and unavoidable even with mitigation.	**TRA-2 Prepare and Implement VMT Reduction Measures.** The CCTA's *Growth Management Program Implementation Guide* (revised February 17, 2021), Appendix F (CCTA Recommended Methodology) describes options for mitigation of VMT impacts. The first two options below apply to development project and plans, and the third applies at a General Plan area-wide scale. 1. A project applicant shall modify a project's characteristics to reduce VMT generated by such project prior to issuance of an occupancy permit. This might involve changing the density or mixture of land uses on a project site, or changing a project's location to one that is more accessible by transit or other travel modes.	Significant and Unavoidable

Impact Statement	Mitigation Measure(s)	Residual Impact

2. A project applicant shall implement transportation demand management (TDM) or physical design measures to reduce VMT generated by a project prior to issuance of an occupancy permit.
3. The City shall participate in a CCTA-approved VMT impact fee program and/or VMT mitigation exchange/banking program, once it is completed and published by CCTA. (Note that CCTA is developing such a program for Contra Costa County.)

When option 2 (TDM plan) is applied for future land use development projects facilitated by the 2040 General Plan that do not meet CCTA screening criteria and thresholds, the City shall require preparation and implementation of a project-level TDM plan with the following TDM measures.

Table 3.12-4 TDM Measures

CAPCOA Handbook Measure	Types of Projects	Core Elements
T-7: Commute Trip Reduction Marketing	Employment-based	*Thoughtful marketing strategy *Readily available commute information *Designated TDM Coordinator *Guaranteed Ride Home
T-8: Provide Ridesharing Program	Employment-based	*Participation in a TMA with ride-matching program *Preferential parking policies for carpools *Promotions and incentives such as gas cards at carpool formation
T-9: Implement Subsidized or Discounted Transit Program	Residential, School, Employment-based	*Location within 1/2 mile of major transit stop or high-quality transit corridor *Participation in Commuter Benefits Program *Easy to sign up for incentives
T-11: Provide Employer Sponsored Vanpool / Point-to-Point Shuttles	Employment-based	*Coordinate logistics of vanpool program *Cover vanpool fares for riders through commute benefits program *Promote and facilitate vanpool creation
T-12: Price Workplace Parking	Employment-based	*Location within 1/2 mile of transit service *Priced at least $5 per day *On-street parking nearby is not readily available

Impact Statement	Mitigation Measure(s)			Residual Impact
	T-13: Implement Employee Parking Cashout	Employment-based	*Parking is provided as benefit *On-street parking nearby is not readily available *Participants pledge to not drive to work	
	T-16: Unbundle Residential Parking Costs	Residential	*On-street parking nearby is not readily available *All parking is priced at a rate at least $30 per month	
	T-23: Community-Based Travel Planning	Residential, Retail, School	*Proactive outreach to all households in service area or project *Program Coordinator designated as lead in promoting non-auto transportation	
	T-10: Provide End-of-Trip Bicycle Facilities	All Projects	*Provision of secure bicycle parking in the form of lockers, a locked storage room, or an attended storage facility *(For non-residential): Provision of lockers, showers, and changing rooms	
	T-21A: Implement Carshare Program / Provide Carshare Parking	All Projects	*Dedicate parking for carshare vehicles *Identify carshare partner	
	T-15 Reduce Parking Supply	Residential	*On-street parking nearby is not readily available	
	T-18: Provide Pedestrian Network Improvements:	All Projects	Completion of one or more projects identified in the San Ramon Bicycle Master Plan	
	T-19-A and T-19-B: Construct or Improve Bicycle Facility/Bicycle Boulevard	All Projects		
	T-20: Expand Bikeway Network	All Projects		
	T-26 Increase Transit Frequency	All Projects in PDAs	Increase the frequency of transit service by providing funding for more operators and vehicles	
	T-25 Increase Transit Coverage	All Projects	Expand transit service to areas without access to it, or expand to later/earlier hours.	

Impact Statement	Mitigation Measure(s)			Residual Impact
	T-23: Community-Based Travel Planning	Residential, Retail, School	*Proactive outreach to all households in service area or project *Program Coordinator designated as lead in promoting non-auto transportation	
	T-22: Bikeshare/Scootershare	All Projects in PDAs	Fund and implement program providing e-bikes or scooters available on demand. Ideally pursue a "dockless" system.	
	Free E-Bike Program	All Projects	Provide e-bikes free of charge to households pledging to reduce vehicle trips	
	Source: *Handbook for Analyzing Greenhouse Gas Emissions Reductions, Assessing Climate Change Vulnerabilities, and Advancing Health and Equity* (CAPCOA, December 2021).			
	Feasible options listed under Table 3.12-4 to reduce VMT below CCTA thresholds shall be implemented for individual projects facilitated by the 2040 General Plan. VMT reduction measures shall be included at project design review and be reviewed and approved by the City prior to issuance of construction permits.			
Impact TRA-3. Implementation of the 2040 General Plan would not substantially increase hazards because of a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Impacts would be less than significant.	No mitigation is required.			Less than Significant
Impact TRA-4. Implementation of the 2040 General Plan would not have the potential to result in inadequate emergency access. This impact would be less than significant.	No mitigation is required.			Less than Significant
Utilities and Service Systems				
Impact UTL-1. Development under the 2040 General Plan would increase demand for water, wastewater, stormwater, and telecommunications services. While utility facilities and infrastructure development and relocation facilitated by the proposed plan would occur in developed areas of San Ramon where such facilities exist, construction-related impacts would be significant and Unavoidable even with mitigation.	Mitigation Measures BIO-1, BIO-2, CR-1, CR-2, CR-2, CR-3, CR-4, GEO-1, GHG-1, HAZ-1, NOI-1, NOI-2, NOI-3, TRA-1, TRA-2, UTL-1, and UTL-2 **UTL-1 Provide Adequate Water Supply and Treatment for Projects** To ensure adequate water supply, as well as consistency with existing utility providers and State regulations, the City shall implement the following measures: ▪ **Infrastructure Maintenance.** Collaborate with water providers in their efforts to maintain wastewater conveyance, treatment, and disposal infrastructure in good working conditions within San Ramon.			Less than Significant

Impact Statement	Mitigation Measure(s)	Residual Impact
	▪ **Water Services Requirement.** Require that water services for new developments do not negatively affect service to existing uses. ▪ **Water Provider Coordination.** Coordinate with water providers to ensure that new proposed development can be adequately served by the water supply system prior to approving the development. ▪ **Commercial and Business Water Conservation.** Require new or remodeled commercial and industrial development to make changes that conserve water, to the extent feasible. This could include utilizing efficient plumbing fixtures, installing drought-tolerant and water-wise landscaping, and harvesting rainwater for irrigation. ▪ **Water Conservation Measures.** Reduce the amount of water used by development by requiring compliance with adopted water conservation measures. **UTL-2 Provide Adequate Wastewater Infrastructure and Treatment for Projects.** To ensure adequate wastewater infrastructure and treatment, as well as consistency with existing utility providers and State regulations, the City shall adopt the following General Plan policy: ▪ New Policy: The City shall ensure that adequate wastewater facilities and services are available to meet the needs of existing and future development through the following measures: ▫ **Infrastructure Maintenance.** Infrastructure Maintenance. Collaborate with Central San in their efforts to maintain wastewater conveyance, treatment, and disposal infrastructure in good working conditions within San Ramon. ▫ **New Development.** Coordinate the review of development proposals with Central San to ensure that new development can be adequately served. ▫ **Wastewater Services Requirement.** Ensure that wastewater services for new development do not negatively affect service to existing uses. ▫ **Capital Improvements Program.** When updating the Capital Improvements Program, identify and include the following: – Projects that could also support green infrastructure improvements. – Street improvements consistent with emergency vehicle access standards. – City-sponsored projects necessary to maintain or improve levels of performance.	

Impact Statement	Mitigation Measure(s)	Residual Impact
Impact UTL-2. Development facilitated by the 2040 General Plan would increase demand for water supply. However, with adherence to the 2040 General Plan goals and policies, water supplies would be adequate to support future development. Impacts would be less than significant.	No mitigation is required.	Less than Significant
Impact UTL-3. Development projected by the proposed plan would increase demand for wastewater treatment. However, the existing wastewater treatment plant has sufficient capacity for future development, and the 2040 General Plan contains policies to ensure treatment is adequate. Impacts would be less than significant.	No mitigation is required.	Less than Significant
Impact UTL-4. Development facilitated under the 2040 General Plan would increase the volume of solid waste generated in San Ramon. However, existing infrastructure that serves the city, as well as policies within the 2040 General Plan, would ensure that the City has adequate capacity to accept the increase in solid waste and comply with federal, State, and local management reduction regulations. Impacts would be less than significant.	No mitigation is required.	Less than Significant

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1 Introduction

This document is a programmatic Environmental Impact Report (EIR) that assesses the potential environmental impacts associated with implementation of an update to the San Ramon General Plan, including eleven respective General Plan elements, amendment to the San Ramon Village Specific Plan, repeal of the North Camino Ramon Specific Plan, and the San Ramon Zoning Code update (collectively referred to in this EIR as the 2040 General Plan). A programmatic EIR evaluates the effects of broad proposals or planning-level decisions such as the proposed plan with a level of detail sufficient to allow informed decisions among planning-level alternatives and to develop broad mitigation strategies.

This chapter discusses (1) the proposed plan and EIR background; (2) the legal basis for preparing an EIR; (3) the scope and content of the EIR; (4) the lead, responsible, and trustee agencies; and (5) the environmental review process required under the California Environmental Quality Act (CEQA). The 2040 General Plan (sometimes referred to in this EIR as the "proposed plan") are described in detail in Chapter 2, *Project Description*.

1.1 EIR Purpose, Type, and Authority

1.1.1 Regulatory Purpose

The 2040 General Plan requires the discretionary approval of the San Ramon City Council; therefore, the proposed plan is subject to the environmental review requirements of CEQA. In accordance with Section 15121 of the *CEQA Guidelines* (California Code of Regulations, Title 14), the purpose of an EIR is to serve as an informational document that:

> "...will inform public agency decision makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project."

As such, the regulatory purpose of this EIR is to disclose the environmental impacts, including any significant effects, of the proposed plan, identify ways to avoid or reduce environmental impacts through planning design or environmental mitigation measures, consider feasible alternatives to the proposed plan, and integrate public participation and input into the overall planning process.

1.1.2 EIR Type

This EIR has been prepared as a programmatic EIR pursuant to Section 15168 of the *CEQA Guidelines*. A programmatic EIR is appropriate for planning documents or other long-term programs. As stated in the *CEQA Guidelines*:

> "A program EIR is an EIR which 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 connections 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."

This EIR is programmatic in nature with a broad comprehensive evaluation to cover the actions taken under the longer-range plan. Some future development projects may require additional project-specific environmental review, given that this program EIR analysis is not parcel- or project-specific.

1.1.3 Legal Authority

This EIR is intended to serve as an informational document for the public and City of San Ramon decision makers. The approval process will include public hearings before the Planning Commission and the City Council to consider certification of a Final EIR and adoption of the proposed plan. Adoption of the proposed plan may not be considered until this EIR has first been considered by the decision makers and certified by the approving body, in this case the San Ramon City Council.

1.2 Environmental Impact Report Background

1.2.1 Notice of Preparation

The City of San Ramon distributed a Notice of Preparation (NOP) of the EIR for a 30-day agency and public review period starting on June 24, 2022 and ending on July 25, 2022. In addition, the City held an EIR Scoping Meeting on July 5, 2022. The meeting was aimed at providing information about the proposed plan to members of public agencies, interested stakeholders, and residents/community members, and at receiving input on the scope of the environmental review. The meeting was held both in person and virtually via Zoom due to ongoing COVID-19 pandemic health and safety precautions.

1.2.2 Comments Received in Response to the NOP

The City received written scoping comment letters from five agencies in response to the NOP during the public review period. The NOP is included in Appendix A-1 of this EIR, along with the written NOP responses that were received. Table 1-1 summarizes the content of the letters and verbal comments and where the issues raised are addressed in this EIR.

Table 1-1 NOP Comments and EIR Location Information

Commenter	Comment/Request	Where It Was Addressed
Agency Comments		
California Geologic Survey (CGS)	Up to date liquefaction and landslide maps shall be used for geologic issues related to the project area. If newer updates are not yet available, reference latest available maps at https://maps.conservation.ca.gov/cgs/EQZApp/app/	Comments relevant to CEQA are addressed in Section 3.5, *Geology, Soils, & Mineral Resources.*
East Bay Municipal Utility District (EBMUD)	Water service for new multi-unit structures shall be individually metered in compliance with California State Senate Bill 7.	Comments relevant to CEQA are addressed in Section 3.13, *Utilities and Service Systems.*
	When development plans are finalized for individual projects within the General Plan area, project sponsors for individual projects should contact EBMUD to request a water service estimate for water service to developments.	
	Project sponsors must submit copies to EBMUD of all known information regarding soil and groundwater quality within or adjacent to the project boundary.	
	EBMUD Policy 9.05 requires that customers use non-potable water, including recycled water, for non-domestic purposes when it is of adequate quality and quantity, available at a reasonable cost, not detrimental to public health or injurious to wildlife. EBMUD requires the City and project sponsors to provide an estimate of expected water demand for potential recycled water uses for each specific project and EBMUD will consider feasibility of providing recycled water to project area.	
	Individual projects within the General Plan present an opportunity to incorporate water conservation measures. Requests that the City include in its conditions of approval a requirement that the project sponsor comply with Assembly Bill 325, Model Water Efficient Landscape Ordinance	
Native American Heritage Commission (NAHC)	States that the proposed project is subject to the requirements and provisions under Senate Bill 18 (SB 18) and Assembly Bill 52 (AB 52) for tribal cultural resources.	Consultation required pursuant to SB 18 and AB 52 was carried out by the City of San Ramon. Related topics relevant to CEQA are discussed in Section 3.4, *Cultural and Tribal Cultural Resources*, of this EIR.

Commenter	Comment/Request	Where It Was Addressed
Department of Toxic Substances Control (DTSC)	Recommends that the EIR address actions to be taken for sites impacted by hazardous waste or hazardous materials, not just those found on the Cortese List. A search of Envirostor should be conducted.	Comments relevant to CEQA are addressed in Section 3.7, *Hazards, Hazardous Materials, & Wildfire.*
	The EIR should acknowledge the potential for historic or future activities on or near the project site to result in the release of hazardous waste/substances	
	Aerially deposited lead contaminated soils may still exist along roadsides, medians, and some existing road surfaces. It's recommended that soil samples be collected for lead analysis prior to performing intrusive activities for projects described in the EIR.	
	Proper investigation for mine waste should be evaluated according to DTSC's 1998 Abandoned Mine Land Mines Preliminary Assessment Handbook.	Comments relevant to CEQA are addressed in Section 3.5, *Geology, Soils, & Mineral Resources.*
	Surveys should be conducted for the presence of lead-based paints or products, mercury, asbestos containing materials, and polychlorinated biphenyl caulk. Removal, demolition, and disposal of the chemicals should be conducted in compliance with California environmental regulations and policies.	Comments relevant to CEQA are addressed in Section 3.7, *Hazards, Hazardous Materials, & Wildfire*.
	If projects under the proposed plans require the importations of soil to backfill any excavated areas, proper sampling shall be conducted to ensure the imported soil is free of contamination.	
	If any sites included as part of the proposed project have been used for agricultural, weed abatement, proper investigation for organochlorinated pesticides be discussed in the EIR and evaluated using DTSC's 2008 *Interim Guidance for Sampling Agricultural Properties*.	
Contra Costa County Flood Control and Water Conservation District (FC District)	Requests a map of watersheds, existing watercourses, tributaries, and man-made drainage facilities, and the FC District's right of way, within the project area, especially where land use designation changes would be located be included in the EIR.	Comments relevant to CEQA are addressed in Section 3.8, *Hydrology and Water Quality.*

Commenter	Comment/Request	Where It Was Addressed
	Requests that the EIR discuss proposed changes in density from the City's General Plan 2035, and its corresponding increases in impervious surface, its effect on the existing storm drain system, and mitigation. The City's GP land use designations should be compared to Contra Costa County's 2040 General Plan for overlap, if applicable.	
	Future development should design and construct storm drain facilities to adequately collect and convey stormwater runoff, without diversion of the watershed, entering or originating within the development to the nearest natural watercourse or adequate man-made drainage facility.	
	The adequacy and stability of the drainage facilities within the project area be studied to determine if local drainage design criteria are met, as well as FEMA National Floodplain Insurance requirements.	
	FEMA floodplain maps show portions of areas surrounding Alamo Creek, Bollinger Creek, San Catanio Creek, San Ramon Creek, South San Ramon Creek, and Tassajara Creek are in special flood hazard areas (SFHAs). The EIR should discuss how new construction or substantial upgrades within SFHAs will conform to the City's floodplain management ordinance.	
	The EIR should discuss the payment of drainage area fees for development within formed drainage areas as a mitigation measure. The FC District charges drainage area fees for new impervious surfaces created within Drainage Area 101A.	Comments relevant to CEQA are addressed in Section 3.8, *Hydrology and Water Quality*.
	The EIR should discuss payment of annual assessments for developments within formed Drainage Area Benefit Assessment (DABA) areas. Contra Costa County imposes special assessments within the DABA known as Drainage Area 75, located within the project area, to fund maintenance activities of the DABA-maintained drainage facilities in the area.	
	The FC District's 50-year plan encourages local communities to incorporate natural features into flood control channels. The City should consider developing policies to incorporate natural features into creeks and channels.	

Commenter	Comment/Request	Where It Was Addressed
	Recommends the EIR request the appropriate environmental regulatory agencies such as the U.S. Army Corps of Engineers, the State Department of Fish and Wildlife, and the State Regional Water Quality Control Board, to explore the permits, special conditions, and mitigation that may be necessary for the project.	Comments relevant to CEQA are addressed in Section 3.8, *Hydrology and Water Quality.*
	The EIR should discuss how the project will comply with the current National Pollutant Discharge Elimination System requirements under the City's Stormwater Management and Discharge Control Ordinances and the C.3 Guidebook	
	The FC District shall be included in the review of all drainage facilities that have a region-wide benefit, that impact region-wide facilities, or that impact FC District-owned facilities.	

Source: Table compiled by Rincon Consultants in 2023.

1.3 Scope and Adequacy

1.3.1 Scope and Sources

This EIR addresses impacts related to all topics listed in 2022 CEQA Guidelines Appendix G.

The alternatives chapter of this EIR (Chapter 5.0) was prepared in accordance with Section 15126.6 of the *CEQA Guidelines* and focuses on alternatives that are capable of eliminating or reducing significant adverse effects associated with the project while feasibly attaining most of the basic project objectives. In addition, the alternatives chapter identifies the "environmentally superior" alternative among the alternatives assessed. The alternatives evaluated include the CEQA-required "No Project" alternative and three alternative development scenarios for the General Plan area.

In preparing this EIR, use was made of pertinent City policies and guidelines, certified EIRs and adopted CEQA documents, and other background documents. References are included as footnote citation references where relevant throughout this EIR document.

1.3.2 Content Adequacy

The level of detail contained throughout this EIR is consistent with the requirements of CEQA and applicable court decisions. Section 15151 of the *CEQA Guidelines* provides the standard of adequacy on which this document is based. The *Guidelines* state:

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

1.4 Lead, Responsible, and Trustee Agencies

1.4.1 Lead Agency

The *CEQA Guidelines* define lead, responsible and trustee agencies. The City of San Ramon is the lead agency for the proposed plan, because it holds principal responsibility for approving the proposed plan.

1.4.2 Responsible Agencies

A responsible agency refers to a public agency other than the lead agency that has discretionary approval over a project or plan. The California Department of Fish and Wildlife (CDFW) is a responsible agency under CEQA for the proposed plan.

1.4.3 Trustee Agencies

A trustee agency refers to a State agency having jurisdiction by law over natural resources affected by a project or plan. The CDFW is a trustee agency for the proposed plan.

1.5 Environmental Review Process

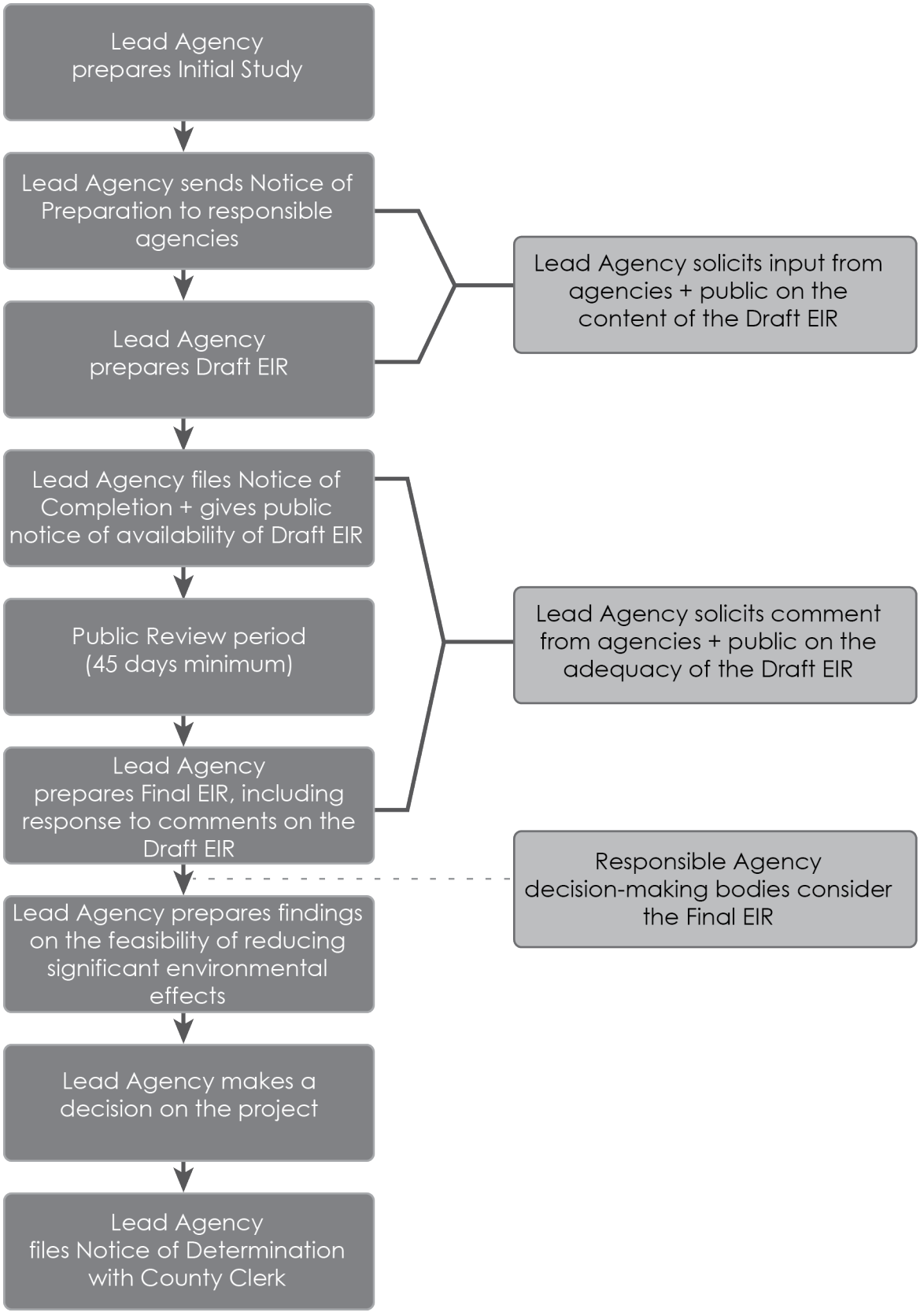
The environmental impact review process, as required under CEQA, is summarized below and illustrated in Figure 1-1. The steps are presented in sequential order.

1. **Notice of Preparation (NOP)**. After deciding that an EIR is required, the lead agency (City of San Ramon) filed a NOP soliciting input on the EIR scope to the State Clearinghouse, other concerned agencies, and parties previously requesting notice in writing (*CEQA Guidelines* Section 15082; *Public Resources Code* Section 21092.2). The NOP for this EIR was posted in the Contra Costa County Clerk's office for a period of 30 days beginning June 24, 2022 and ending July 25, 2022. In addition, the City of San Ramon held an EIR Scoping Meeting on July 5, 2022. A public notice of the Planning Commission scoping session meeting for July 5, 2022 was published in the San Ramon Valley Times on June 24, 2022, mailed and emailed to all known interested parties, posted with the Contra Costa County Clerk and State Clearinghouse, posted in City facilities, and on the City Website.
2. **Draft EIR.** This Draft EIR contains the following required components: a) table of contents or index; b) summary; c) project description; d) environmental setting as part of the various topical sections; e) discussion of significant impacts (direct, indirect, cumulative, growth-inducing, and unavoidable impacts) as part of the various topical sections; f) a discussion of alternatives; g) mitigation measures as part of the various topical sections; and h) discussion of irreversible change (*CEQA Guidelines* Sections 15120 through 15132).
3. **Notice of Completion (NOC).** The lead agency must file a NOC with the State Clearinghouse when it completes a Draft EIR and prepare a Public Notice of Availability of a Draft EIR. The lead agency must place the NOC in the County Clerk's office for 30 days (Public Resources Code Section 21092) and send a copy of the NOC to anyone requesting it (*CEQA Guidelines* Section 15087). Additionally, public notice of Draft EIR availability must be given through at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off the project site (not appropriate for citywide or plan-level efforts such as the proposed plan); and c) direct mailing to owners and occupants of contiguous properties (not appropriate for citywide or plan-level efforts such as the proposed plan). The lead agency must solicit input

from other agencies and the public and respond in writing to all comments received (*Public Resources Code* Sections 21104 and 21253). The minimum public review period for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days unless the State Clearinghouse approves a shorter period (*Public Resources Code* Section 21091). Given such requirements, this Draft EIR will be noticed via publication in a newspaper of general circulation and involve a 45-day public review and comment period.

4. **Final EIR.** A Final EIR must include the following components: a) the Draft EIR; b) copies of comments received during public review; c) list of persons and entities commenting; and d) responses to comments (*CEQA Guidelines* Section 15132).
5. **Final EIR Certification.** Prior to making a decision on the proposed plan, the lead agency must certify that: a) the Final EIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the lead agency (i.e., San Ramon City Council); and c) the decision-making body reviewed and considered the information in the Final EIR prior to approving the proposed plan (*CEQA Guidelines* Section 15090).
6. **Lead Agency Plans Decision.** The lead agency may a) disapprove the proposed plan because of its significant environmental effects; b) require changes to the proposed plan to reduce or avoid significant environmental effects; or c) approve the proposed plan despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted (*CEQA Guidelines* Sections 15042 and 15043).
7. **Findings/Statement of Overriding Considerations**. For each significant impact of the proposed plan identified in the EIR, the lead agency must find, based on substantial evidence, that either: a) the proposed plan has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the proposed plan are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or proposed plan alternatives infeasible (*CEQA Guidelines* Section 15091). If an agency approves a plan or project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision.
8. **Mitigation Monitoring Reporting Program.** When the lead agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects (*CEQA Guidelines* Section 15097).
9. **Notice of Determination (NOD).** The lead agency must file a NOD after deciding to approve a plan or project for which an EIR is prepared (*CEQA Guidelines* Section 15094). A local agency must file the NOD with the County Clerk. The NOD must be posted for 30 days and sent to anyone previously requesting notice. Posting of the NOD starts a 30-day statute of limitations on CEQA legal challenges (*Public Resources Code* Section 21167[c]).

Figure 1-1 Environmental Review Process



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2 Project Description

As part of a comprehensive planning process, the City of San Ramon (City) proposes to adopt an update to the San Ramon General Plan, including eleven respective General Plan elements, amendment to the San Ramon Village Specific Plan, repeal of the North Camino Ramon Specific Plan, and the San Ramon Zoning Ordinance update (collectively referred to in this EIR as the 2040 General Plan). The 2040 General Plan elements include: Land Use; Housing; Traffic and Circulation; Safety; Open Space and Conservation; Parks and Recreation; Public Facilities and Utilities; Noise, Air Quality and GHG Emissions, Growth Management, and Economic Development. San Ramon Zoning Ordinance updates would occur to ensure consistency with the updated General Plan.

The 2040 General Plan serves as the long-term blueprint for development across the Planning Area (the General Plan area).[1] This chapter provides an overview of the General Plan area location and setting as well as the proposed plan's objectives, components, and policies/programs. Intended uses of this EIR by agencies with permitting and approval authority over the proposed plan, in addition to required permits and approvals, are also discussed.

2.1 General Plan Area Location and Setting

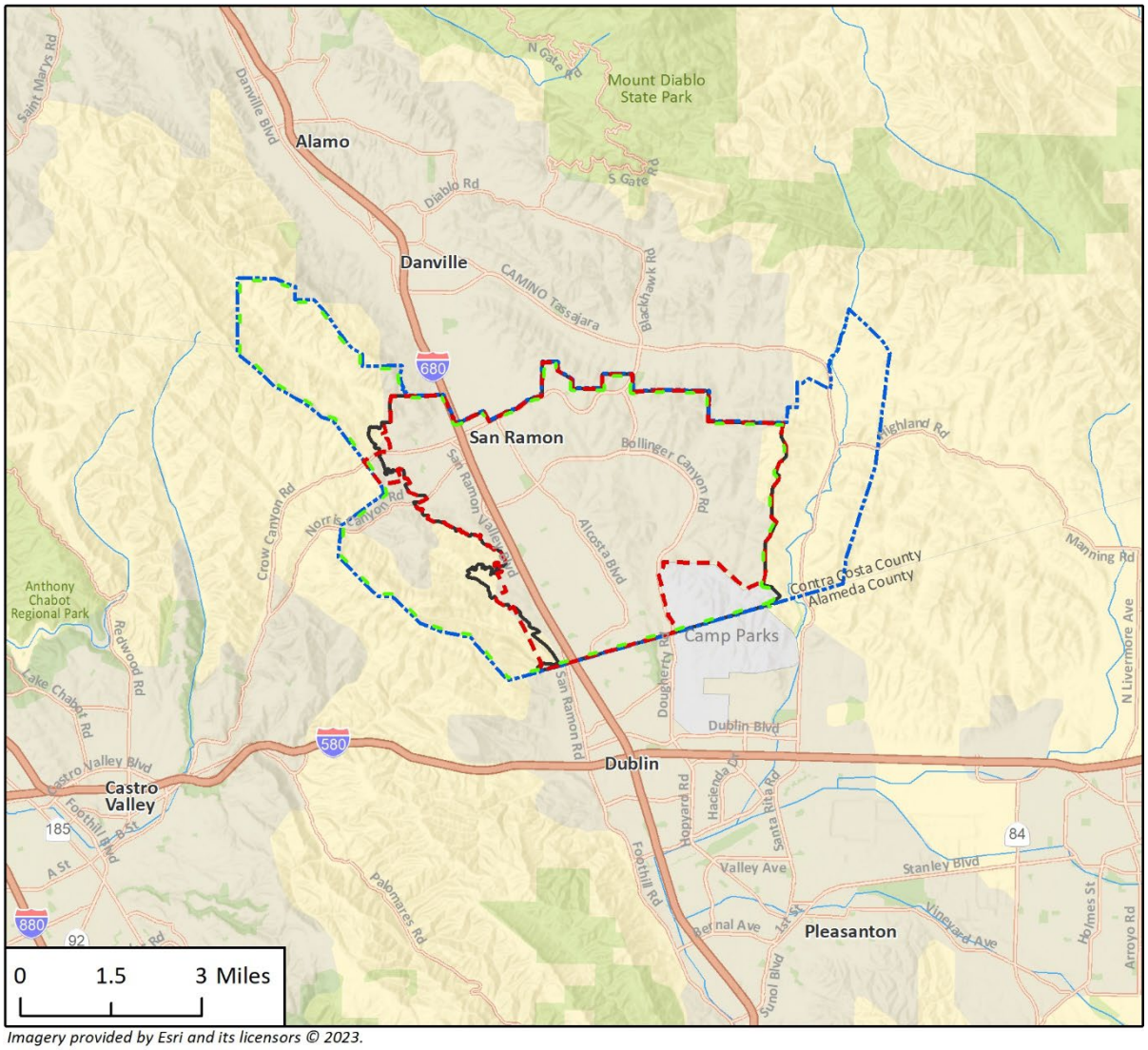
2.1.1 Regional Location

San Ramon is located in Contra Costa County approximately 34 miles east of downtown San Francisco and 38 miles northeast of downtown San Jose. San Ramon is part of the greater San Francisco Bay Area metropolitan area (see Figure 2-1 for regional location) and occupies 20.1 square miles (or 12,862 acres) of southern Contra Costa County (see Figure 2-2 for plan location). San Ramon is situated in the San Ramon Valley and surrounded by the Town of Danville and unincorporated Contra Costa County to the north, unincorporated Contra Costa County to the east, the City of Dublin to the south, and unincorporated Contra Costa County to the west.

Regional access to San Ramon is provided via the Donald D. Doyle Highway (Interstate 680 [I-680]), which is located in the western portion of San Ramon and generally runs in a north-south direction. Regional access to the City via transit is provided by Bay Area Rapid Transit (BART) Walnut Creek and Dublin/Pleasanton stations and connections to AC Transit and the Altamont Commuter Express. The Livermore Municipal Airport is located approximately 13 miles southeast of San Ramon, and the Oakland International Airport is located approximately 26 miles west of San Ramon.

[1] The area covered by the 2040 General Plan consists of the corporate limits of the City as well as lands within the City's Planning Area. The term "planning area" applies to all incorporated and unincorporated territory that bears a physical relationship to the long-term planning of the City. The Planning Area of San Ramon encompasses the City limits, the Sphere of Influence, and the Urban Growth Boundary totaling 23,499 acres. Overall, planning decisions made for the City are assumed to have a bearing on growth and development in these unincorporated adjacent areas; however, the City does not propose to annex any of this area as part of this General Plan. Instead, the General Plan will continue the City's long-time policy of deferring to the County land use designations and regulations in unincorporated adjacent areas. Development or change that happens in the unincorporated adjacent areas during the lifetime of the General Plan would occur under the jurisdiction of the County. Therefore, this EIR does not evaluate impacts resulting from future growth within the unincorporated adjacent areas as part of the proposed plan. However, where relevant, this EIR does evaluate potential impacts resulting from future growth within the City limit to lands within the unincorporated adjacent areas of the Planning Area. The unincorporated adjacent areas of the Planning Area are also included in the cumulative setting for this EIR.

Figure 2-1 Regional Location



Imagery provided by Esri and its licensors © 2023.
Diablo, Dublin and Las Trampas Ridge quadrangles and T02S R01W S01-05, 08-17, 22-27,35 & T02S R01E S06-09,17-20.

City Limits
Planning Area (General Plan Area)
Sphere of Influence
Urban Growth Boundary

N

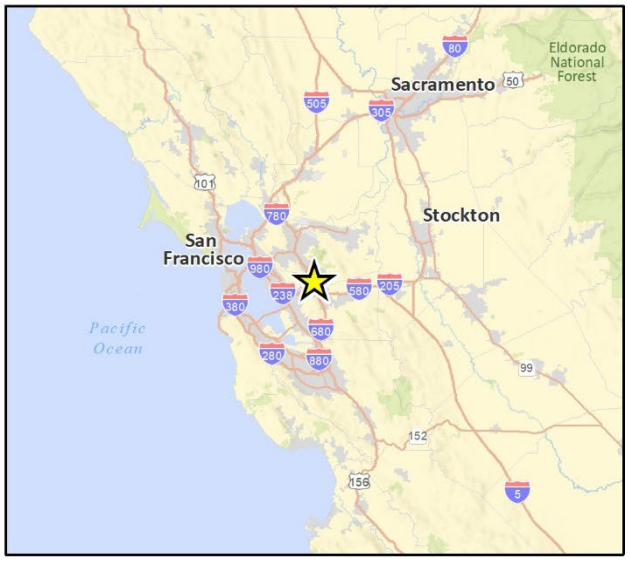
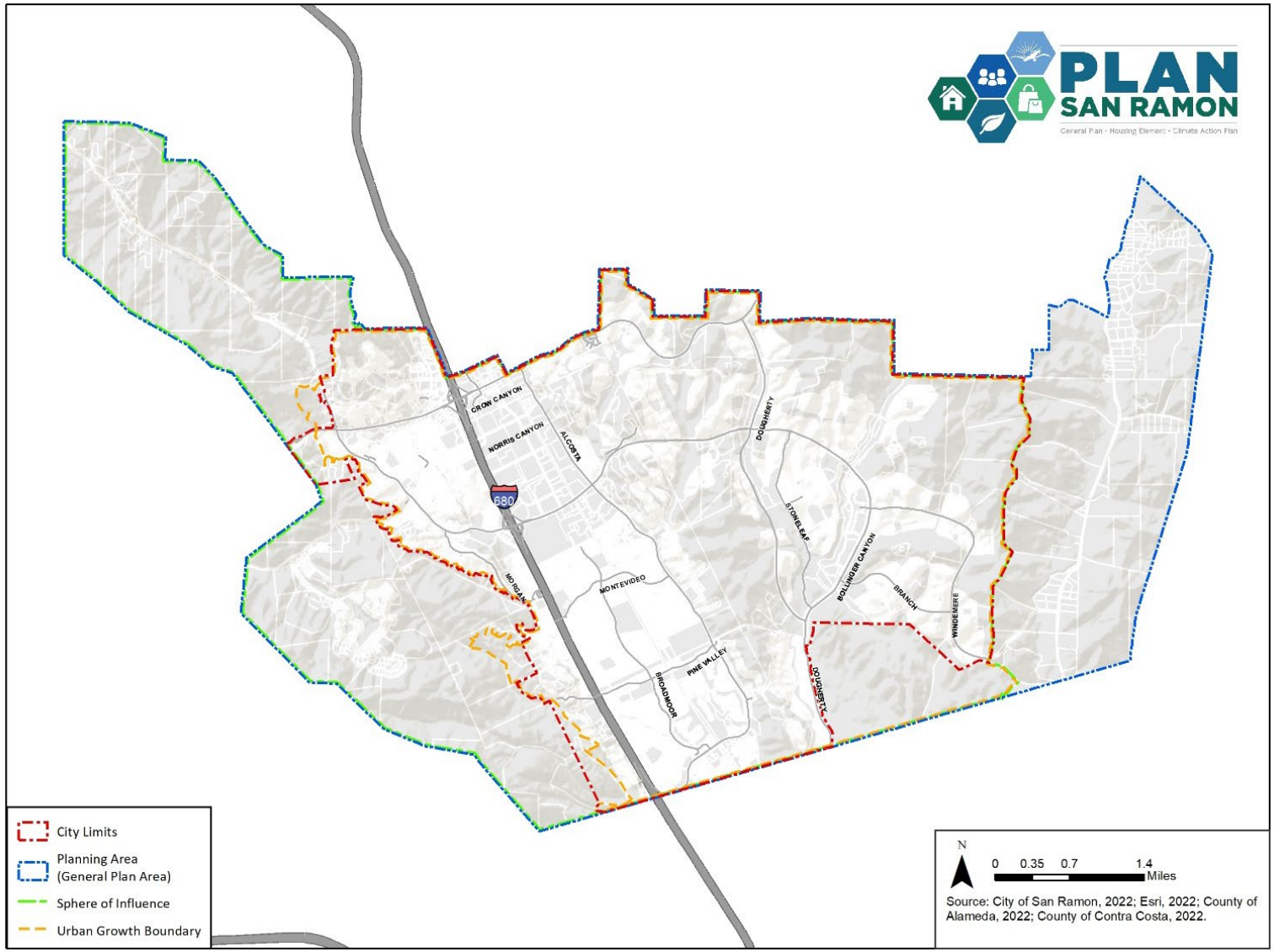


Figure 2-2 Plan Location



2.1.2 Local Setting

San Ramon is a suburban community and is developed primarily with single-family residential uses with some multifamily residential uses and a major downtown employment center, Bishop Ranch. A large portion of San Ramon is also comprised of public and institutional uses including parks, open space, religious facilities, schools, and government-owned property (including municipally-owned property). Commercial, retail, mixed-uses, and Bishop Ranch, a major employment center, are primarily located to the east of I-680 in the northern portion of San Ramon.

The San Ramon topography is varied, featuring a mix of the rolling hills of the Diablo Range and the flatter basin of the San Ramon Valley.[2] San Ramon's topography is distinguished by its proximity to Mount Diablo to the northeast, the Diablo Range foothills to the north, the Las Trampas Regional Wilderness to the northwest, and Bishop Ranch Regional Preserve to the west.

The climate in San Ramon is warm and temperate. Rain in San Ramon falls mostly in winter, with relatively little rain in the summer. The average temperature in San Ramon is 57 degrees Fahrenheit and the annual rainfall is 18.5 inches.[3]

2.2 Existing General Plan Area Characteristics

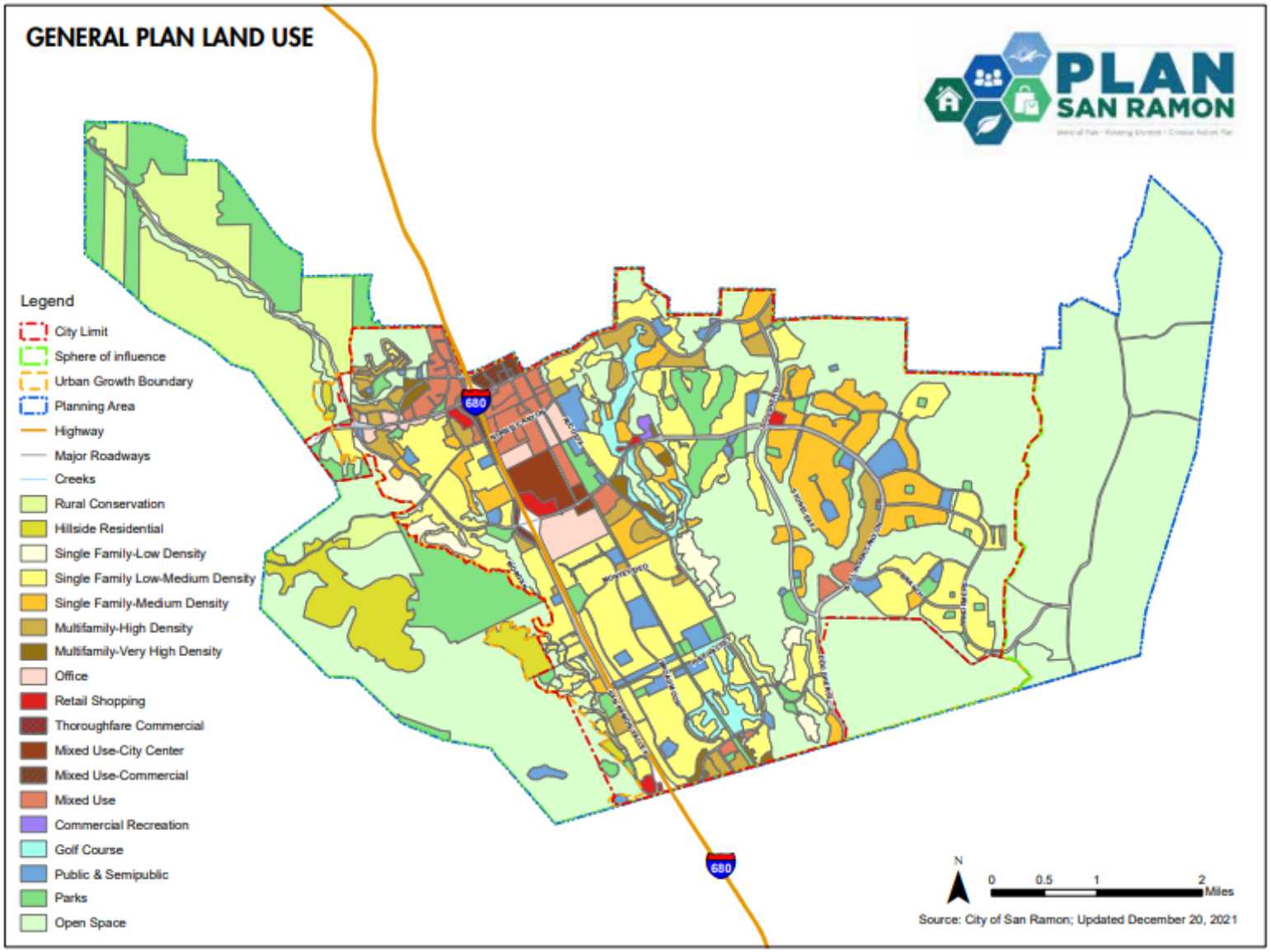
Within the City Planning Area (the General Plan area) are the City Limits, Sphere of Influence (SOI), and Urban Growth Boundary (UGB). The San Ramon Planning Area encompasses 23,499 acres (36.7 square miles). The City Limits total 12,862 acres (20.1 square miles). San Ramon's SOI encompasses 19,737 acres (30.8 square miles), and the UGB totals 13,738 acres (21.5 square miles).[4] Approximately 83,820 people live within the General Plan area as of 2022. In addition, 29,460 housing units exist within the General Plan area as of 2022.[5]

2.3 Existing General Plan Area Land Use Designations

The current San Ramon General Plan Land Use Element establishes 18 separate land use designations to provide a mixture of land uses for the City. The existing City of San Ramon Land Use Designations Map is shown in Figure 2-3.

[2] Topographic-Map. 2022. San Ramon. https://en-us.topographic-map.com/maps/l6pl/San-Ramon/#:~:text=The%20topography%20of%20San%20Ramon,of%20the%20San%20Ramon%20Valley. (accessed June 2020)
[3] Climate-Data. 2022. Climate San Ramon. https://en.climate-data.org/north-america/united-states-of-america/california/san-ramon-16019/ (accessed June 2022)
[4] San Ramon, City of. 2022. Existing Conditions and Trends Workbook. March 2022. https://plansanramon.com/images/SRGPU_ECTW_Reduced_2022_03_03_MG.pdf (accessed March 2023)
[5] California Department of Finance (CDF). 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2021-2022, with 2020 Benchmark. Available: <https://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/>. (accessed March 2022)

Figure 2-3 Existing General Plan Land Uses



2.4 Plan Objectives

The City's 2040 General Plan objectives are as follows:

- Outline a vision for San Ramon's long-range physical and economic development and resource conservation that reflects the aspirations of the community and the smart growth mandate of Measure G (1999);
- Provide strategies and specific implementing actions that will allow this vision to be accomplished;
- Establish a basis for judging whether specific development proposals and public projects are in harmony with Plan policies and standards;
- Allow City departments, other public agencies, and private developers to design projects that will enhance the character of the community, preserve and enhance critical environmental resources, and minimize hazards; and
- Provide the basis for establishing and setting priorities for detailed plans and implementing programs, such as the Zoning Ordinance, the Capital Improvement Program (CIP), Climate Action Plan, specific plans, etc.

2.5 2040 General Plan Components

Proposed General Plan Geography and Land Use Allowance

Table 2-1 shows the overall land use components summary for the 2040 General Plan and is followed by a more-detailed description of the proposed plan. The 2040 General Plan boundary for purposes of this EIR is considered all land within the City Planning Area.

Table 2-1 also indicates the net change from San Ramon existing conditions (in 2022) to proposed 2040 General Plan buildout conditions assumed by the City by 2040; this EIR analyzes the net change in terms of potential physical environmental impacts.

Table 2-1 Existing and Proposed Plan Land Uses Components Summary

	Existing (2022)	Projected (2040)	Net Change from Existing to Proposed
Residential Units	29,460	39,615	10,155
Non-residential gsf	5,348,646	5,695,985	347,339
Population	83,820	110,089	26,269 [1]

Source: San Ramon, City of. 2023. 2040 General Plan and 2023-2031 Housing Element Projections. May 12, 2023.

Notes:

[1] This population estimate assumes approximately 2.92 persons per household per California Department of Finance, and then a 5 percent projected vacancy rate was applied to further adjust.

The 2040 General Plan would provide the framework for development of up to 10,155 net new[6] residential units and up to 347,339 net new non-residential gross square feet (gsf). Density ranges would be between 0.2 and 60 dwelling units per acre.

[6] Net new means the change from City of San Ramon existing (2022) development to buildout conditions assumed by the City (i.e., 2040 General Plan) by 2040; this EIR analyzes the net change in terms of potential physical environmental impacts.

With little vacant land remaining for new development within the City Limits, San Ramon's philosophy is to focus new growth inward through the intensification of land use density by encouraging infill and redevelopment projects within the existing urban areas defined by the UGB, which include the San Ramon Village Specific Plan and City Center Project. The 2040 General Plan serves as the City's long-term development blueprint through 2040, contains goals and policies guiding land use and infrastructure decisions through 2040, and brings the General Plan up to date in response to latest State and regional plans and regulations related to housing,[7] climate-related hazards,[8] emergency evacuation routes and access, water supply, and mobility. As such, the updated policies of the proposed 2040 General Plan are the focus of the 2040 General Plan description below, and the development opportunities under the umbrella of the 2040 General Plan are discussed in detail under the proposed Land Use Element and Housing Element descriptions.

Proposed General Plan Elements Aspects

Land Use Element

The Land Use Element contains the Land Use Designations descriptions and map as well as the policies and standards that directly shape land use decisions and the resulting physical development of San Ramon. The Land Use Element includes goals, policies, and programs that guide land development in San Ramon. The Element addresses the type and intensity of development allowed on a site, the mix of uses permitted within San Ramon, and the character of the community. The Land Use Element also determines the general location of residential, commercial, industrial, public, and open space uses. This Element balances land use issues, opportunities, and constraints with the other community needs and desires.

The North Camino Ramon Specific Plan (NCRSP) area consisted of approximately 295 acres located in both the Bishop Ranch and Crow Canyon areas. The vision of the NCRSP was for a blend of retail, commercial services, and housing that would encourage redevelopment of the NCRSP area. In response to changes to State housing regulations and to address the community need for a balance of housing, commercial, and retail uses, the NCRSP would be repealed as part of the General Plan 2040 Update and replaced with focused land use policies for the City core. The San Ramon Village Specific Plan was updated in 2020 with a vision to create a pedestrian-oriented, mixed-use community with concentrated commercial and residential uses, while maintaining viable light industrial and service commercial uses. There are approximately 1,889 existing residential units and six live-work units with approximately 1,262 additional units planned and identified housing opportunity sites within the Housing Element. Total Crow Canyon Subarea buildout is anticipated to be approximately 3,151 units.

PROPOSED LAND USE DESIGNATIONS

The Land Use Element establishes 16 separate land use designations to provide a mixture of land uses for the City. The specific proposed land use designations in the Land Use Element are shown in Table 2-2. Figure 2-4 shows the proposed City of San Ramon Land Use Designations.

[7] The City will update the San Ramon Housing Element as part of the 6th Cycle Regional Housing Needs Allocation (RHNA) and to comply with California Government Code Sections 65580 to 65589.11.
[8] Pursuant to SB 379, which amended California Government Code Section 65302.

Table 2-2 Description of Proposed San Ramon Land Use Designations

Land Use Designation	Description	Residential Density	Intensity (Floor Area Ratio)
Residential			
Rural Conservation	This designation provides for rural single-family residential development of up to one unit per five acres of buildable land in un-serviced areas with clustered development encouraged to permit suitable development sites of less than 20 percent slope and to achieve an open space preservation target of 90 percent. Density increases of up to one unit per two and a half acres of buildable land may be allowed with mandatory clustered development and open space dedication of over 80 percent of the gross area. A summary of the density ranges for the Rural Conservation designation has been provided in Table 4-44 above. The Resource Management Chapter of the Zoning Ordinance may set additional requirements, for those properties identified in Figure 8-3 of the Open Space and Conservation Element. A habitat protection plan may be required where sensitive species or habitat could be affected.	1.0-5.0 units/acre	n/a
Hillside Residential	This designation provides for a base density of up to one unit per five acres of buildable land for single-family residential development in serviced areas. Developments of four or more units must use clustered development techniques on suitable development sites with slopes of less than 20 percent. Density increases of up to two units per acre of buildable land in utility served areas may be permitted to achieve an open space preservation target of 70 percent. The Resource Management Chapter of the Zoning Ordinance may set additional requirements for those properties identified in Figure 8-3 of the Open Space and Conservation Element. A habitat protection plan may be required where sensitive species or habitat could be affected.	1.0 – 2.0 units/acre	n/a
Single Family Residential-Low Density	Single-family residential development at densities of between 0.2 to three units per acre. Typical lot sizes range from 10,000 to 15,000 square feet. This designation reflects existing low-density neighborhoods, such as Twin Creeks Hills and Royal Ridge.	0.2-3.0 units/acre	n/a
Single Family Residential-Low Medium Density	Single-family residential development at densities of between three to six units per acre with a maximum lot size of 10,000 square feet. The Oaks in the Westside is an example of this designation.	3.0-6.0 units/acre	n/a
Single Family-Medium Density	Single-family residential development at densities of between six to 15 units per acre with typical lot sizes of approximately 3,500 square feet and including detached units, zero lot line units, garden patio homes, and townhomes. New residential development in *Country Faire* is typical of this designation.	6.0-14.0 units/acre	n/a

Land Use Designation	Description	Residential Density	Intensity (Floor Area Ratio)
Multiple Family – High Density	Multiple-family residential development at densities of between 15-30 units per acre. Such development should reflect high quality design with integrated open space and recreational and/or cultural amenities, and opportunities for workforce housing. Structure parking would be necessary at the higher end of the range. Promontory View in the Crow Canyon Redevelopment area is an example of this designation.	15.0-30.0 units/acre	n/a
Multiple Family – Very High Density	This new designation provides for the highest density multiple-family residential development at densities of between 30-50 units per acre. Such development units should reflect high quality design with integrated open space and recreational and/or cultural amenities, and opportunities for workforce housing. Structure parking would be necessary.	30.0-50.0 units/acre	n/a
Mixed-Use			
Mixed Use, Commercial Emphasis	The purpose of the Mixed-Use, Commercial Emphasis (MUX) district is to provide areas for an integrated neighborhood, primarily to enhance existing and promote new commercial uses (retail and/or office) with complementary residential uses. A density range of 20 to 40 dwelling units per acre allows a variety of residential housing types located along street frontages. The MUX district envisages commercial uses (retail and/or office) as the primary use along street frontages, with residential uses located behind or above the primary commercial uses. Development could be stand-alone, vertical, or horizontal mixed-use configurations. Commercial FAR minimums will be set to maintain retail square footage.	20.0-40.0 units/acre	0.7-2.0, min 0.45 non-residential-
Mixed Use, Residential Emphasis	The purpose of the Mixed-Use, Residential Emphasis (MUR) district is to provide areas for an integrated neighborhood, with a combination of primarily residential uses mixed with complementary office and commercial uses. The MUR district provides housing infill opportunities on existing small and mid-size office and service commercial parcels. A density range of 20 to 40 dwelling units per acre allows a variety of residential housing types located along street frontages. Development could be stand-alone, vertical, or horizontal mixed-use configurations. Within the MUR district, residential FAR minimums are established to maintain and encourage residential development within this district.	20.0 – 40.0 units/acre	0.7-2.0, min. 0.50 residential -

Land Use Designation	Description	Residential Density	Intensity (Floor Area Ratio)
Downtown Mixed-Use, North	The purpose of the Downtown Mixed-Use, North (DMU-N) district is to encourage an integrated neighborhood of commercial and residential uses within the Core area. The intent is to incorporate residential uses in the existing office setting with pedestrian friendly streetscapes, open spaces and trails connecting to the Iron Horse Trail and City Center. Residential uses are located adjacent to the street and complementary offices, services, and goods in close proximity to transportation networks. The allowed density in the DMU-N district ranges from a minimum of 20 dwelling units per acre to a maximum of 60 dwelling units per acre. Development is generally intended to be vertical in nature with residential entryways taking advantage of the City's Walking District, and allowance for higher density. Development could be vertical mixed use or stand-alone residential in proximity to nearby commercial uses with a horizontal mixed-use configuration.	20.0-60.0 units/acre	1.25-2.75-
City Center Mixed Use	This designation applies to City Center Bishop Ranch and the adjacent BR-2600 property in the core area of San Ramon. It is intended to foster a vibrant, integrated and cohesive mix of civic, retail, office, residential and open space uses and promote a walkable, bikable environment at the physical center of the city. The CCMU designation is also intended to create a vital, attractive destination for people from other parts of the city and the region. Development intensities of up to 0.70 FAR are permitted, with additional FAR, up to a maximum of 1.35, allowed for projects that include such elements as affordable housing; significant public benefits and/or amenities such as public art and plazas, public facilities; and/or a transit facility nearby or in close proximity. The allowable residential density range is 22 dwelling units per acre up to 50 dwelling units per acre. Development should reflect high quality design, with integrated open space and recreational and/or cultural amenities, as well as opportunities for workforce housing. Structured parking may be required.	22.0-50.0 units/acre	0.70-1.35
Non-Residential			
Office	Business, professional, and public offices at intensities of up to 0.45 FAR, including retail uses and restaurants in mixed-use buildings and supporting commercial services at appropriate locations.	n/a	0.45
Retail Shopping	Includes sites for retail shopping and services at intensities of up to 0.35 FAR, including restaurants, commercial recreation facilities, and personal, business and financial services.	n/a	0.35

Land Use Designation	Description	Residential Density	Intensity (Floor Area Ratio)
Thoroughfare Commercial	Travel-oriented commercial uses at intensities of up to 0.50 FAR, including hotels, motels, service stations, restaurants, etc., located on major arterial streets and intersections.	n/a	0.50
Golf Courses	Golf courses and accessory facilities and uses at intensities of up to 0.10 FAR.	n/a	0.10
Commercial Recreation	Sports and fitness clubs, horse stables, and amusement parks at intensities of up to 0.35 FAR.	n/a	0.35
Public and Semipublic	Schools, hospitals and related medical offices, religious institutions, utilities, and quasi-public uses at intensities of up to 0.35 FAR.	n/a	0.35
Parks	Public and private recreation sites and facilities at intensities of up to 0.10 FAR.	n/a	0.10
Open Space	Land protected from development and primarily held in its natural vegetative state, with some land privately owned and used for agricultural purposes. The maximum FAR for non-residential structures is 0.10, and the residential density is limited to one unit per 20 acres, which may be reduced with Clustered Development and creek and ridgeline protection standards may apply.	1.0 unit/ 20 acres	0.10

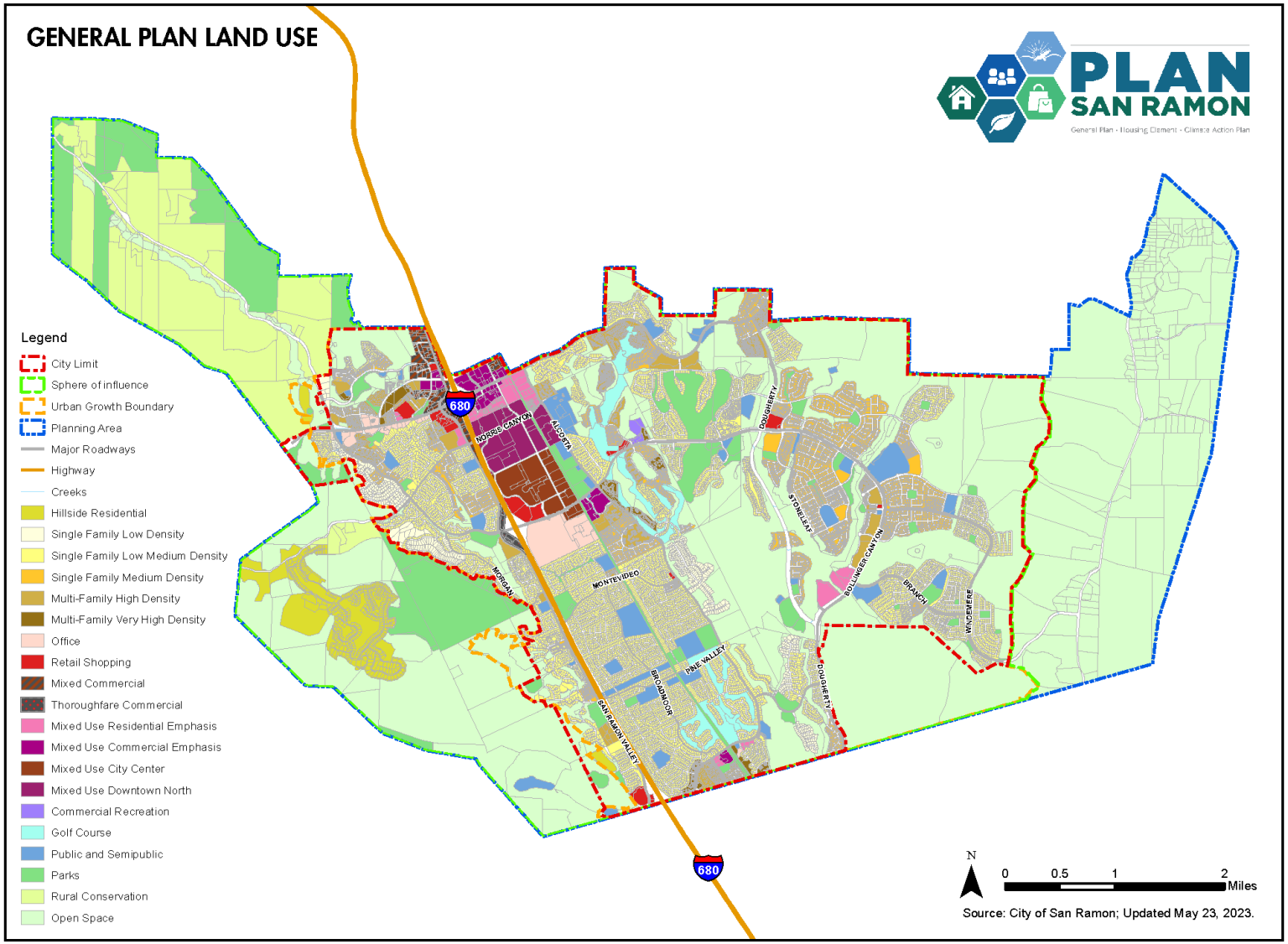
Source: San Ramon, City of. 2023. San Ramon Draft 2040 General Plan Land Use Element.

POTENTIAL NON-RESIDENTIAL DEVELOPMENT AREAS

Non-residential development would be concentrated in areas already identified by the existing General Plan for non-residential development as well as in existing non-residential areas. As of 2022, there is over 13 million square feet of floor area dedicated to retail, office, and industrial uses. Despite an almost six percent vacancy rate, retail floor area is expected to have a demand of up to 1,800,000 square feet. This potential growth is directly linked to incremental demand incidental to population growth and the creation of mixed-use village areas. Office space accounts for approximately 9.5 million square feet in San Ramon. Of that total, approximately 16 percent is vacant. Through 2040, San Ramon can expect an increase in the overall demand for office square footage between 500,000 to 750,000 square feet. San Ramon's current industrial square footage accounts for less than 0.5 percent of the East Bay industrial inventory. As such, San Ramon has 801,000 square feet of industrial land and might expect to attract an additional 250,000 to 500,000 of new industrial space by 2040.[9]

[9] San Ramon, City of. 2023. San Ramon Draft 2040 General Plan Land Use Element.

Figure 2-4 Proposed San Ramon Land Use Designations



PROPOSED LAND USE ELEMENT GUIDING POLICIES, POLICIES, AND PROGRAMS

Guiding Policies and supportive policies and programs of the proposed General Plan Land Use Element are shown in Table 2-3.

Table 2-3 San Ramon Land Use Element Guiding Policies, Policies, and Programs

ID #	Goals and Supportive Policies/Programs
4.6-G-1	**Foster a pattern of development and encourage a compatible mix of land uses that enhances the character of the City and the community.**
4.6-I-1	Continue to maintain an Urban Growth Boundary (UGB), as shown on the General Plan Diagram that limits the extent of urban development and services within the San Ramon Planning Area. Amendments to the Urban Growth Boundary greater than 25 acres require City voter approval.
4.6-I-2	As directed by the City Council, petition the Local Agency Formation Commission (LAFCo) to extend the City's Sphere of Influence (SOI) if the County's Urban Limit Line (ULL) is amended.
4.6-I-3	Assess the City's future needs for housing and employment along with any development proposals and if changes are necessary, provide an opportunity for voter review of the Urban Growth Boundary.
4.6-I-4	Allow for minor technical adjustments to the Urban Growth Boundary, to be approved by the City Council with a four-fifths vote, to accommodate contiguous development on developable sites not to exceed 25 acres, only where: ▪ No prior adjustment has been approved and the contiguous development is not part of a larger project; ▪ Hillside, creek, and ridgeline standards of the Resource Management Chapter of the Zoning Ordinance will be met.
4.6-I-5	Amendment of the Sphere of Influence and/or annexation of land to the city is recommended prior to filing a development application.
4.6-I-6	Residential development in the Rural Conservation designation should mitigate impacts to natural features, sensitive habitat, and agricultural resources as required by local Ordinance or habitat protection plan.
4.6-I-7	As part of the development review process, conditionally approve projects to mitigate potential impacts caused by proposed development that could potentially affect sensitive habitat areas, sensitive species habitats, migratory patterns, and riparian corridors identified in the General Plan.
4.6-I-8	Continue to pursue interagency coordination with the County to: ▪ Require that development applications for projects within the City's Sphere of Influence conform to the hillside, creek, and ridgeline standards of the Resource Management Chapter of the Zoning Ordinance, where applicable; and ▪ Notify the City regarding County development applications within the City's Sphere of Influence, and ▪ Allow the City to work with the applicant in accordance with Permit Streamlining Act to negotiate the protection of land outside the City limits designated as priority open space.
4.6-I-9	Require residential development to employ objective design standards to maintain architectural quality while incorporating 360-degree design principles.
4.6-I-10	Provide a range of housing opportunities for current and future residents.
4.6-I-11	Provide high quality public facilities, services, and other amenities within close proximity to residents.
4.6-I-12	Except as precluded by the California Density Bonus Law or other applicable laws and regulations, ensure that all residential development provides required parking to meet residential parking standards.

ID #	Goals and Supportive Policies/Programs
4.6-I-13	Evaluate shared parking or other alternative parking proposals for residential development based on project-specific parking studies that analyze project need consistent with the Zoning Ordinance alternative parking provisions.
4.6-I-14	Promote and affirmatively further fair housing policies and programs.
4.6-I-15	Periodically review and update, as necessary, local housing policies and procedures to ensure they do not pose impediments to furthering fair housing.
4.6-I-16	Support the development and preservation of affordable housing throughout the city for a variety of income levels.
4.6-I-17	Require Clustered Development for four or more units that will maximize preservation of visible open space and encourage preservation of open space by allowing density to increase based on the percentage of the gross area permanently preserved as open space.
4.6-I-18	Continue to develop and refine the residential hillside development standards that address: ▪ Location of hillside residential units, including maximum elevation limits based on water pressure zones and hillside viewshed analysis, ▪ Clustered Development provisions with limitations on cluster size to preserve open character, ▪ Building development and design in a clustered format, including standards for building height and massing, ▪ Bonus provisions for clustered development, including amount of bonus, alternate development forms, common recreational facilities, phasing, etc., ▪ Requirements for deeding of natural areas as conservation lots with ownership and maintenance by homeowners' association, non-profit land trusts, or other City approved public agency.
4.6-I-19	Strengthen the role of central Bollinger Canyon Road as the City's premier retail corridor.
4.6-I-20	Foster vibrant neighborhood and community shopping centers of sizes and at locations that provide daily convenience for San Ramon residents and employees, minimize the need for longer/multiple automobile trips, and sustain a strong retail base for the city.
4.6-I-20	Continue to limit non-retail uses to no more than 25 percent of the total FAR of a neighborhood or community shopping center and adopt clear economic findings that must be made before approving non-retail uses that exceed the limit.
4.6-I-21	Ensure that neighborhood retail centers and commercial service buildings are compatible with the surrounding neighborhood while incorporating 360-degree design principles.
4.6-I-22	Foster the development of commercial services that can be supported by local residents, businesses, and workers and visitors.
4.6-I-23	Encourage the provision of amenities and events that promote San Ramon's neighborhood and community shopping centers as community gathering places.
4.6-I-24	Promote redevelopment with a mix of high-density residential, retail and other compatible non-retail uses in the Mixed Use General Plan land use designation.
4.6-I-25	Continue to develop and refine objective design standards for mixed use development that will result in pedestrian-scaled environment, integrated parking, streetfront windows, and entries, and public and private open space or as provided under a separate Specific Plan process.
4.6-I-27	Encourage the integration of the Marketplace and former Orchard Supply Center sites through connectivity with the Walking District resources, Iron Horse Trail, City Hall, San Ramon Library, and Central Park by focusing on improved circulation, access, and visibility.
4.6-I-28	Require a parking study to substantiate a request for reduced parking requirement in new mixed use development.
4.6-I-29	Allow for the revitalization and intensification of infill sites within the Bishop Ranch Business Park, consistent with citywide objective design standards.

ID #	Goals and Supportive Policies/Programs
4.6-I-30	Allow a diverse mix of complementary uses within Bishop Ranch (including locations within CityWalk) to better meet the daily needs of workers and to reduce the need to travel by automobile. Complementary uses shall be consistent with site zoning, compatible with the primary use and shall not result in a significant adversely effect on the traffic-carrying capacity of adjacent streets.
4.7-G-1	**Consider the use of Specific Plans, and other area plans to develop land use programs that reflect specific area conditions and land use needs.**
4.7-I-1	Ensure new development within the Plan Area is consistent with the adopted Northwest Specific Plan.
4.7-I-2	Ensure new development within the Plan Area is consistent with the adopted San Ramon Village Specific Plan.
4.7-I-3	Prior to new development consistent with the General Plan, amend the Westside Specific Plan as necessary to ensure consistency with the General Plan
4.7-I-4	Develop a streamlined review process for the CityWalk Master Plan to facilitate the development of the residential units approved in the Master Plan in accordance with the CityWalk Development Agreement.
4.7-I-5	Continue to monitor development activities is the Tassajara Valley Area.
4.8-G-1	**Maintain and enhance San Ramon's identity.**
4.8-I-1	Continue to develop and refine community design documents to provide comprehensive design guidelines for beautification, of streetscapes creek corridors, City signs, public art, and community entries in San Ramon.
4.8-I-2	Design, location, and size of new development should consider the environment and a site's natural features.
4.8-I-3	Continue to refine citywide lighting standards to implement appropriate illumination levels for residential, commercial, and industrial land uses, while reducing light pollution.
4.8-I-4	Ensure that parking facilities adequately address the community image, aesthetics and functional needs of the city.
4.8-I-5	Encourage the linkage and integration of new development with existing neighborhoods by means of Walking District implementation, Complete Streets networks, open space areas, parks, pathways, associated rights-of-way, and/or easements as a means of enhancing pedestrian and bicycle connections.
4.8-I-6	Seek to assure maximum public access to the Iron Horse Trail through land acquisition, licensing agreements with Contra Costa County, incentives for dedication, overhead trail crossings and improvement of land for trailhead parks and walkways.
4.8-I-7	Require new commercial and office development to provide plazas, courtyards, seating areas and other similar outdoor passive recreation areas.
4.8-I-8	Use the development review process to e minimizes new development's impacts and preserve and/or enhance views of the natural landscape.
4.8-I-9	Continue to implement landscaping guidelines for public roadways that improve their visual character.
4.8-I-10	Continue to implement gateway treatments for City entries that help residents and visitors know they have arrived in San Ramon.
4.8-I-11	Require new office and commercial development to provide outdoor art that is clearly visible to the public or contribute to a citywide public art program though the City Beautification Fund.
4.8-I-12	Promote drought-tolerant landscaping on private property that is suitable for San Ramon's climate.
4.8-I-13	Require landscape treatment for public rights-of-way in all new residential, office, and commercial development.

ID #	Goals and Supportive Policies/Programs
4.8-I-14	Ensure that businesses provide signs that are compliant with the Zoning Ordinance, attractive and consistent with neighboring commercial uses, minimize visual clutter from roadways and other public areas, and, where possible, cannot be seen from residential neighborhoods.
4.8-I-15	Maintain attractive and distinctive street identification signs for all areas of the city.
4.8-I-16	Continue to refine urban design standards in the Zoning Ordinance as needed for large-scale development to promote smart growth principles while minimizing negative impacts on adjacent properties.
4.8-I-17	Implement the City Zoning Ordinance sun access plane requirements and provide provisions for encroachments into the sun access plane to allow architectural flexibility.
4.8-I-18	As part of development proposals, encourage public access to creeks as scenic visual and passive recreational amenities in a manner consistent with need of applicable resource agencies to provide creek and habitat protection.
4.8-I-19	Continue to provide park and recreational amenities that combine well-designed buildings, recreational equipment and playing fields, and complementary landscaping at key locations throughout the city.
4.8-I-20	Require all walls and fences to be designed to minimize visual monotony.
4.8-I-21	Encourage the funding and development of high quality public art throughout the City including commercial areas, public spaces, parks, and trails.
4.9-I-1	Establish provisions for making beneficial use determinations and providing administrative relief from Plan policies and zoning regulations that have the potential for deprivation of property rights.
4.9-I-2	Consider potential adverse health and safety impacts associated with land use decisions and reduce negative impacts on residents from hazardous materials, industrial activities, facility locations, and design features.
4.9-I-3	Evaluate and implement environmental protection measures within the City's authority that support equitable treatment of all neighborhoods.
4.9-I-4	Ensure transparent public decision-making processes through effective public outreach, engagement, and participation that is inclusive of socially disadvantaged individuals and groups.

Source: San Ramon, City of. 2023. San Ramon Draft 2040 General Plan Land Use Element.

Housing Element

The update to the Housing Element was adopted in January 2023 for the 2023-2031 Housing Element. However, the Housing Element is also part of the overall General Plan Update, including in terms of proposed 2040 General Plan residential buildout, and, thus, is also summarized here.

REGIONAL HOUSING NEEDS ASSESSMENT

The RHNA is a California State Housing Law requirement that is part of the periodic process of updating local general plan housing elements. The RHNA allocates housing need based on future estimates of housing unit growth need over the RHNA planning period (2023-2031). The RHNA identifies the projected number of dwelling units that will be needed to accommodate estimated future growth need during the planning period at specified levels of affordability. On January 12, 2022, ABAG issued its final 6th Cycle RHNA Allocation Plan, which determined the City of San Ramon needed to accommodate 5,111 dwelling units. Table 2-4 indicates the RHNA allocation by income category. These categories are determined as a percentage of county area median income (AMI), adjusted for household size. As demonstrated in Table 2-4, the distribution of market rate housing is approximately 39 percent of the total allocation and approximately 61 percent is divided among the three lower income categories.

Table 2-4 San Ramon RHNA Allocation for 2023-2031 by Income Category

Income Category (% of County AMI)	Number of Units	Percent
Extremely low/Very Low (50% or less)[1]	1,497	29.2%
Low (51% - 80%)	862	16.9%
Moderate (81% - 120%)	767	15%
Above moderate (+120%)	1,985	38.9%
Total	**5,111**	**100%**

Note: [1] The City has a RHNA allocation of 1,497 very low-income units (inclusive of extremely low-income units). While the RHNA did not separately define housing needs for extremely low-income households, the very low-income allocation can be split evenly between very low- and extremely low-income households. The City's RHNA of 1,497 very low-income units has been allocated accordingly.

AMI = Area Median Income
Source: City of San Ramon 2022a

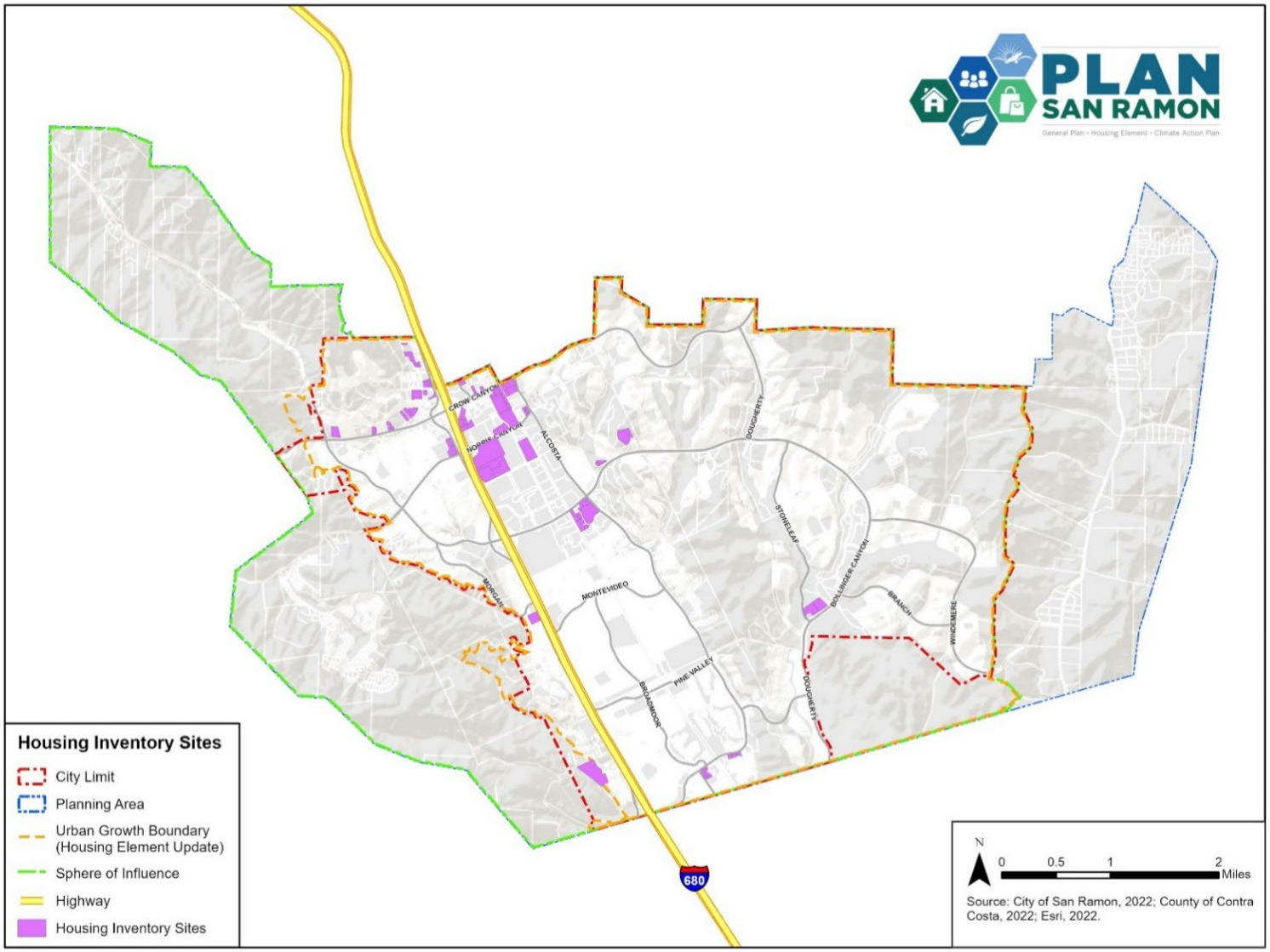
The City has already approved a total of 2,458 units (147 very low, 206 low, 222 moderate, and 1,883 above moderate), that are expected to be constructed during the 6th Cycle planning period. The City of San Ramon can also count, as credit toward meeting the 6th Cycle RHNA, potential ADUs to the RHNA requirements by using the trends in ADU construction to estimate new production. Based on average ADU building permits issued for the 2018 to 2021 period, the City anticipates permitting 70 ADUs (21 very low income, 21 low income, 21 moderate income, and seven above moderate income), that are expected to be constructed during the 6th Cycle planning period.

To ensure the City meets the minimum RHNA, HCD recommends a 20 percent buffer to account for the "No Net Loss" requirement as mandated by SB 166. This is to ensure that there would be a backup if various constraining factors prevent development from occurring on one or more sites. The City has determined that a 21 percent buffer for extremely low/very low income categories, a 22 percent buffer for low income categories, and 24 percent buffer for moderate income categories would allow for up to 5,881 new possible units.

CANDIDATE HOUSING OPPORTUNITY SITES INVENTORY

Pursuant to AB 2348 and AB 1397 requirements, the City of San Ramon will be required to accommodate future growth need through the identification of sites/parcels that can be rezoned entirely or where a zoning overlay can be applied that permit residential development at specific affordability levels. The 2023 - 2031 Housing Element identifies 71 housing opportunity sites, totaling approximately 266 acres (see Figure 2-5). This would meet the RHNA allocation of units after subtracting the 70 ADUs and 2,528 pending projects, rezoning 55 sites, and the inclusion of 15 carryover sites from the 4th and 5th Housing Element Cycle to allow for development of an additional new 5,881 dwelling units for a total 8,409 possible dwelling units on parcels currently zoned for lower density or not zoned for residential uses. The mix of units would be distributed among housing opportunity sites throughout San Ramon, with a concentration in the San Ramon Village Specific Plan and City Core areas. The San Ramon Village Specific Plan area is generally bounded by the Town of Danville to the north, the Preserve subdivision and multi-family residential uses to the west, Crow Canyon Road to the south and Interstate 680 (I-680) to the east. The City Core area includes the downtown area between Bollinger Canyon Road and Crow Canyon Road with Alcosta Boulevard bounding it to the east and the freeway to the west. Increased density on opportunity sites outside the Specific Plan and City Core areas would accommodate a mix of lower, moderate, and market-rate units, along with a mix of uses with amenities throughout San Ramon.

Figure 2-5 Potential Housing Sites Locations



PROPOSED HOUSING ELEMENT GUIDING POLICIES, POLICIES, AND PROGRAMS

Guiding Policies and supportive policies and programs of the proposed General Plan Housing Element are shown in Table 2-5.

Table 2-5 San Ramon Housing Element Guiding Policies, Policies, and Programs

ID #	Goals and Supportive Policies/Programs
GP 11.5.1-1	**Provide a diversity of housing types and affordability levels within San Ramon to meet the needs of community residents.**
IP 11.5.1-1	Identify sites appropriate for the development of a variety of housing types and price ranges to meet the needs of all socioeconomic segments of the community (including extremely low, very low, low, moderate, and above moderate income households).
IP 11.5.1-2	Develop target density to encourage higher yield of units in all residential and mixed use zones.
IP 11.5.1-3	Encourage the development of housing for special needs groups, including seniors, large households, persons with disabilities (including developmental disabilities), and the homeless near public transportation services.
IP 11.5.1-4	Facilitate the development of affordable housing throughout the community through use of financial and or regulatory incentives, where feasible.
IP 11.5.1-5	Require new housing development projects to comply with the City Inclusionary Housing Ordinance to provide development and/or in-lieu fees for affordable housing to extremely low, very low, low, and moderate income households.
IP 11.5.1-6	Maintain a variety of housing types that complements the employment opportunities within the community and encourages a jobs/housing balance.
IP 11.5.1-7	Encourage diversity of unit size and number of bedrooms within multi-family housing developments (exempting senior projects) and strive to provide three- and four-bedroom units for large households.
IP 11.5.1-8	Offer financial and regulatory incentives to promote a combination of residential, retail, and office uses in areas designated for mixed use development.
IP 11.5.1-9	Encourage construction of accessory dwelling units within single-family and multi-family residential neighborhoods.
IP 11.5.1-10	Develop a workforce housing priority access system that identifies households best served with priority access to City housing programs.
IP 11.5.1-11	Pursue opportunities with Contra Costa County and non-profit organizations to offer first-time homeownership programs to current and prospective San Ramon residents and workers.
IP 11.5.1-12	Require non-residential development to contribute to the supply of housing affordable to lower income households, including extremely low income households through the Commercial Linkage Fee program.
IP 11.5.1-13	Disperse below-market rate (BMR) housing throughout residential neighborhoods and within housing development projects. Ensure that affordable units are indistinguishable from surrounding market-rate units.
IP 11.5.1-14	Encourage developers to provide amenities for a diversity of households, including single heads of households, persons with disabilities, seniors, and extended families
IP 11.5.1-15	Utilize affordable housing agreements, when appropriate, to encourage a full range of housing types.
IP 11.5.1-16	Work with neighboring jurisdictions in the Tri-Valley area to promote and encourage the development of affordable housing.
IP 11.5.1-17	Continue to work with Contra Costa County to ensure that affordable housing is included in all Dougherty Valley Development Plans, in all lands within the Sphere of Influence/Planning Area.

ID #	Goals and Supportive Policies/Programs
IP 11.5.1-18	Require commercial and non-residential development to contribute to the supply of affordable housing (including extremely low-income households) through new construction, partnerships with non-profit affordable housing providers, or payment of linkage fees through compliance with the Affordable Housing Commercial Linkage Fee Ordinance.
IP 11.5.1-19	Convene the Housing Advisory Committee (HAC) as needed to ensure that housing policies and programs are implemented and to create and retain affordable housing in the City of San Ramon.
IP 11.5.1-20	Seek available State and federal funds, and encourage the use of private financing mechanisms, to assist in the production of affordable housing.
IP 11.5.1-21	Encourage the development of accessible housing units such as single-story dwelling units, renovation of existing housing stock, and the addition of Accessory Dwelling Units (ADUs) to existing residential properties to support persons with disabilities and seniors.
IP 11.5.1-22	Encourage the construction of senior housing near commercial and mixed use centers to bring essential services within walking distance to residents.
IP-11.5.1-23	Monitor and seek input on senior housing issues so that the senior population of San Ramon has access to housing which meets their needs as the population ages.
IP 11.5.1-24	Encourage development of workforce housing by non-profit organizations primarily engaged in housing construction or management.
IP 11.5.1-25	Seek opportunities to educate the public regarding the community, environmental, and economic benefits of workforce housing.
IP 11.5.1-26	Encourage infill housing development projects (including senior housing) near employment, shops/services, and transportation corridors, particularly within the City's core and Priority Development Areas.
GP 11.5.2-1	**Create safe and aesthetically-pleasing neighborhoods, and provide adequate housing to meet the needs of all household types and income groups.**
IP 11.5.2-1	Promote increased awareness of the importance of property maintenance to long-term housing quality and engage the community to preserve neighborhoods.
IP 11.5.2-2	Enforce City ordinances that maintain the appearance and safety, and prevent deterioration, of residential neighborhoods.
IP 11.5.2-3	Continue to provide rehabilitation incentives in the form of low-interest loans to lower and moderate income homeowners.
IP 11.5.2-4	Continue to permit manufactured housing in residential districts provided that units meet the same construction and design standards as conventional, single-family housing and are placed on permanent foundations.
IP 11.5.2-5	Ensure that units produced for lower and moderate income households are maintained at designated income levels for the term established in the entitlement.
IP 11.5.2-6	Work to preserve the long-term affordability of publicly assisted affordable housing units and to discourage their conversion to market-rate housing.
IP 11.5.2-7	Ensure that objective standards such as design, mass, and scale for housing is compatible with the character of the surrounding neighborhood.
GP 11.5.3-1	**Ensure all persons and household types have equal access to housing in San Ramon.**
IP 11.5.3-1	Collaborate with and support efforts of organizations dedicated to eliminating housing discrimination in San Ramon.
IP 11.5.3-2	Provide incentives for projects that include housing for seniors, lower and moderate income households, and special needs groups.
IP 11.5.3-3	Encourage the provision of housing with supportive services for special needs groups, such as the homeless, persons with disabilities, and victims of domestic violence.
IP 11.5.3-4	Facilitate the development of a variety of housing types to foster housing mobility

ID #	Goals and Supportive Policies/Programs
IP 11.5.3-5	Pursue actions and policies that mitigate economic displacement of residents.
IP 11.5.3-6	Distribute new affordable housing opportunities throughout the City to avoid overconcentration low income housing in specific neighborhoods.
IP 11.5.3-7	Employ place-based strategies for neighborhood improvements.
GP 11.5.4-1	**Promote climate change goals through energy conserving practices in the location, construction, renovation, and maintenance of San Ramon's housing units.**
IP 11.5.4-1	Utilize the Urban Growth Boundary as a tool to focus the provision of diverse housing options through infill housing development projects near employment, shops/services, and transportation corridors; particularly within the City's core and Priority Development Areas.
IP 11.5.4-2	Promote a combination of residential, retail, and office uses in areas designated for mixed use to reduce Vehicle Miles Traveled.
IP 11.5.4-3	Allow minor variations in building setbacks and/or solar orientation during Plan Review to increase energy efficiency of new housing units.
IP 11.5.4-4	Enforce the State's energy conservation standards for new residential construction and renovations to existing structures.
IP 11.5.4-5	Encourage innovative designs to maximize passive energy efficiencies, while retaining compatibility with surrounding neighborhoods.
IP 11.5.4-6	Disseminate information and support efforts by public utilities to encourage home conservation practices.

Source: San Ramon, City of. 2023. San Ramon Draft 2040 General Plan Housing Element.

Traffic and Circulation Element

The Traffic and Circulation Element addresses the movement of people and goods in and around San Ramon. San Ramon's transportation network and services provide mobility for residents, employees, and visitors, and serve goods movement throughout San Ramon. The transportation network includes the roadway network, walking, bicycling, and transit to and from San Ramon and surrounding BART stations, and travel modes provided by Transportation Network Companies (TNCs), such as Uber and Lyft.

San Ramon's Transportation Systems Management Program incorporates five core strategies:

1. Transportation programs are based on traffic circulation system needs and land use planning.
2. The City's traffic circulation planning efforts are integrated with those of adjoining cities and counties in a cooperative, regional planning effort.
3. State of the art traffic engineering techniques and principles are used to bring planned improvements to reality.
4. Transportation demand management (TDM) strategies are employed to reduce dependence on single-occupant vehicles for commute travel.
5. All transportation modes are considered in all phases of design and construction within the City to create a circulation network that is safe, efficient, and convenient for all user groups.

PROPOSED TRAFFIC AND CIRCULATION ELEMENT GUIDING POLICIES, POLICIES, AND PROGRAMS

Guiding Policies and supportive policies and programs of the proposed General Plan Transportation and Circulation Element are shown in Table 2-6.

Table 2-6 San Ramon Traffic and Circulation Element Goals, Policies, and Programs

ID #	Goals and Supportive Policies/Programs
5.1-G-1	**Maintain acceptable LOS and ensure that future land uses and the circulation system are in balance.**
5.1-I-1	Strive to maintain traffic LOS C or better as the standard at all intersections with a maximum LOS D during a.m. and p.m. peak periods.
5.1-I-2	Accept LOS E during a.m. and p.m. peak periods with the possibility of signalized intersections at or closely approaching the limits of LOS E (average control delay <=80 seconds/vehicle), only on arterial routes bordered by non-residential development where improvements to meet the City's LOS standard would be prohibitively costly or disruptive.
5.1-I-3	Require new development provide traffic impact studies and a VMT assessment for all proposed new development if the Project would projected to generate 50 or more net new peak hour vehicle trips and a VMT assessment based on adopted local, regional, and/or State technical criteria. or as Preparation of traffic impact studies and/or VMT assessments may also be determined or waived by the City Traffic Engineer. requested by the City Traffic Engineer.
5.1-I-4	Identify and implement mitigations based on traffic studies and VMT assessments.
5.1-I-5	Implement uniform design standards for City arterials, collectors, local streets, and private roadways.
5.1-I-6	Monitor key intersection LOS on a regular basis and document the results.
5.1-I-7	Implement the following transportation programs: Transportation Demand Management Program (TDM) Program, Street Smarts Traffic Safety Program, Residential Traffic Calming Program, , and TRAFFIX Program.
5.1-I-8	Implement a Safe Routes to School Program to address access and safety issues on streets adjacent to elementary schools in San Ramon.
5.2-G-1	**Actively participate in local and regional transportation planning.**
5.2-I-1	Continue to develop and implement Action Plans for Routes of Regional Significance, in cooperation with the Southwest Area Transportation Committee (SWAT), the Contra Costa Transportation Authority (CCTA), and the Tri-Valley Transportation Council (TVTC).
5.2-I-2	Continue to implement the Tri-Valley Transportation Action Plan through participation in the Tri-Valley Transportation Council (TVTC).
5.2-I-3	Participate in programs to mitigate regional traffic congestion.
5.2-I-4	Ensure local jurisdiction consistency with the goals and policies of the Contra Costa Congestion Management Plan (CMP).
5.2-I-5	Emphasize regional transportation demand management and trip reduction strategies as alternatives to improvements to existing transportation facilities and the construction of new transportation facilities.
5.2-I-6	Identify and consider the impacts of land use decisions on regional as well as local transportation facilities.
5.2-I-7	Pursue regional air quality and greenhouse gas reduction objectives through effective management of the City's transportation system.
5.3-G-1	**Encourage transportation facilities that consider the users' safety and allow for all modes of travel based on local conditions and needs of the community.**
5.3-I-1	Maintain and periodically update Complete Streets Guidelines that establish local review and assessment criteria and encourage development of a multimodal transportation network to meet community needs.
5.3-I-2	Implement Complete Streets principles, as appropriate, for new roadway design and significant roadway rehabilitation.

ID #	Goals and Supportive Policies/Programs
5.3-I-3	Coordinate the implementation of Complete Streets concepts, as appropriate, with ongoing transportation and congestion relief programs such as the TDM Program, Street Smarts Traffic Safety Program, Residential Traffic Calming Program, Safe Routes to School Program and TRAFFIX Program.
5.3-I-4	Encourage Complete Streets concepts as a VMT and greenhouse gas reduction strategy.
5.3-I-5	Consider the access and mobility needs of special needs groups such as seniors and persons with disabilities in the implementation of all Complete Streets projects.
5.4-G-1	**Design arterial roadways to efficiently move inter-city traffic, thereby minimizing through-traffic in residential areas of the City.**
5.4-I-1	Ensure that adequate north-south and east-west arterial capacity is provided to accommodate future travel demand and, where appropriate, implement Complete Streets concepts pursuant to Policy 5.3-G-1.
5.4-I-2	Implement the City's five-year Capital Improvement Plan.
5.4-I-3	Construct capacity and roadway efficiency improvements necessary to serve growth generated by development under the General Plan.
5.4-I-4	Maximize the carrying capacity of arterial roadways by controlling the number of intersections, and minimizing residential and commercial driveway access, minimizing on-street parking, and requiring sufficient off-street parking strategies to meet the needs of each proposed project.
5.4-I-5	Require traffic impact mitigation fees on new residential and commercial development to ensure that transportation improvements are constructed before the increased traffic causes conditions to deteriorate.
5.4-I-6	Make optimal use of federal, state, and other funding sources to complete circulation system improvements.
5.4-I-7	Minimize congestion on arterials by implementing the policies in the Complete Streets, Transportation Demand Management and Public Transit sections of the Circulation Element.
5.4-I-8	Encourage regional freight movement on freeways and other appropriate routes; evaluate and implement vehicle weight limits as appropriate on arterial, collector and local roadways to mitigate truck traffic impacts in the community.
5.4-I-9	Specify hauling routes for transporting hazardous materials that minimize the risk to people and property.
5.5-G-1	**Design collector and local roadways to improve circulation and to connect residential and commercial areas of the City while incorporating Complete Streets concepts pursuant to Policy 5.3-I-2 where appropriate.**
5.5-I-1	Implement residential traffic calming measures, as warranted, and police enforcement to mitigate speeding and other traffic impacts in residential areas of the City.
5.5-I-2	Continue to implement traffic-control measures and design features that support the City's goals for collector roadways.
5.5-I-3	Continue to implement traffic-control measures, residential traffic calming, and design features that support the City's goals for local roadways.
5.5-I-4	Construct capacity and roadway improvements necessary to serve growth generated by development under the General Plan.
5.5-I-5	Mitigate traffic impacts to collector streets as a result of new residential and commercial development.
5.5-I-6	Maintain controlled or permit-only parking restrictions in residential areas as approved by the City Council based on unique circumstances and the Municipal Code criteria.

ID #	Goals and Supportive Policies/Programs
5.6-G-1	**Utilize Transportation Demand Management (TDM) strategies as an integral component of the City's transportation program to reduce total vehicle trips and VMT trips on San Ramon roadways and reduce the corresponding vehicle emissions that promote regional air quality improvements.**
5.6-I-1	Engage with public agencies and other jurisdictions to promote local and regional public transit service in San Ramon as part of a multimodal and Complete Streets strategy.
5.6-I-2	Encourage and assist major employers and property managers of commercial sites with 50 or more employees to reduce the number of single-occupant vehicles by participating in the City's TDM programs, including the commuter benefit program, and programs provided by the Bay Area Air Quality Management District.
5.6-I-3	Encourage additional local bus or other public transportation service providers to and from regional transit lines. The City shall strive to improve the transit service to and from all neighborhoods and commercial districts in San Ramon.
5.6-I-4	Preserve options for future public transit and alternative transportation uses when designing improvements for roadways such as Bollinger Canyon Road Corridor within Dougherty Valley.
5.6-I-5	Encourage future transit uses within the I-680 corridor right-of-way and within the City of San Ramon.
5.6-I-6	Engage with other jurisdictions and agencies to coordinate the City's TDM programs with regional plans and action plans that are aimed at reducing traffic congestion and VMT, and improving air quality.
5.6-I-7	Encourage new development to include a mix of uses and Complete Streets concepts that will allow people to walk and bike between destinations and reduce the amount of automobile VMT.
5.6-I-8	Encourage alternative public transportation programs and obtain funding for new TDM projects or programs.
5.6-I-9	Encourage employers and commercial complexes to emphasize public transit services or private alternatives to the single-occupant vehicle.
5.6-I-10	Work with transit providers to situate amenity rich transit stops and shelters at convenient and safe locations.
5.6-I-11	Promote increased transit ridership through the use of Transportation Management Associations and other employer-based transit programs, equip buses with three slot bike racks, and make transit information readily accessible in a smart-phone friendly format.
5.6-I-12	Coordinate with Caltrans and transit providers to identify and implement park and ride lots with updated amenities with convenient access to public transit facilities, often called Mobility Hubs.
5.6-I-13	Work with the San Ramon Valley Unified School District and other appropriate agencies and organizations to reduce vehicle trips through the provision of transit programs, the TRAFFIX School Bus Program and promoting carpooling, bicycling, and walking.
5.6-I-14	Consider strategies such as shared parking, parking management plans (including valet parking), transit connected satellite parking and/or the construction of public parking facilities in the City Center or other commercial areas to serve projected parking demand, while carefully balancing the need for adequate parking against the desire to minimize traffic growth and create a pedestrian/bicycle friendly environment using Complete Streets design concepts.
5.6-I-15	Work with local transit providers to increase and expand weekend transit service and late night Owl service from regional rail and transit hubs.
5.6-I-16	Explore opportunities for the location or relocation of a transit center and/or multiple Mobility Hubs within Bishop Ranch Business Park to better geographically balance the public transit needs for the City.

ID #	Goals and Supportive Policies/Programs
5.6-G-2	**Encourage trip reduction measures in an effort to reduce VMT, improve air quality, and reduce greenhouse gas emissions.**
5.6-I-17	Encourage "Park Once" concepts as a VMT reduction strategy for mixed-use, commercial, and public facilities through the integration of common design features and shared parking concepts including but not limited to Parking Benefit Districts.
5.6-I-18	Encourage shared parking facilities and parking reductions for compatible land uses to minimize excessive parking to reduce inefficient use of land, unnecessary pavement and stormwater runoff, and encourage alternative transportation and reductions in VMT.
5.6-I-19	Encourage infill, Transit-Oriented Development (TOD) and first and last mile transit access connections as VMT reduction strategies for existing and proposed development.
5.7-G-1	**Encourage bicycling and walking as alternatives to driving, consistent with Complete Streets concepts.**
5.7-I-1	Establish a network of on- and off-street bicycle routes to encourage their use for commute, recreational, and other trips. Improve and expand bicycle routes for commuters in San Ramon and between San Ramon and neighboring jurisdictions.
5.7-I-2	Develop bicycle routes that provide access to regional employment centers, shopping centers, public facilities, transit centers, schools, and parks.
5.7-I-3	Continue to emphasize the Iron Horse Trail as a major north-south route for non-motorized modes of transportation including walking, biking, rollerblading and scooters by improving connectivity and enhancing amenities for these modes.
5.7-I-4	Encourage future development along the Iron Horse Trail corridor to provide connection points and adjacent amenities, as appropriate.
5.7-I-5	Require bicycle parking, storage and other support facilities as part of new office, retail, housing, and public facilities developments.
5.7-I-6	Continue to promote and implement through the development review process, continuous circulation facilities within commercial districts and residential neighborhoods to enhance connectivity and promote pedestrian and bicycle modes of transportation consistent with Complete Streets concepts.
5.7-I-7	Continue to implement accessibility standards for seniors and physically disabled persons within the public rights-of-way.
5.7-I-8	Pursue grant funding for implementation of projects identified in the adopted Bicycle Master Plan and Walking District Master Plan, including funding from State and regional sources.
5.7-I-9	Implement roadway improvement projects to minimize both temporary and permanent reductions in bicycle and pedestrian mobility and/or accessibility.
5.7-I-10	Work with neighboring jurisdictions to ensure that continuity in bicycle and pedestrian networks is provided at jurisdictional boundaries.
5.7-I-11	Work with Caltrans and other appropriate agencies to improve bicycle and pedestrian mobility at freeway crossings.
5.7-I-12	Promote educational efforts about traffic laws and safe practices for all modes of transportation.
5.7-I-13	Prioritize bicycle network improvements in the core area of San Ramon, including construction of new facilities and actions to remove barriers to cycling as identified in the San Ramon Bicycle Master Plan, in order to support development in the City's Priority Development Areas (PDAs).

Source: San Ramon, City of. 2023. San Ramon Draft 2040 General Plan Transportation and Circulation Element.

Safety Element

The Safety Element evaluates natural and urban safety hazards in San Ramon and outlines guiding policies, policies, and implementation programs to minimize risk to life and property. The primary natural hazard threats for San Ramon are earthquakes, drought, localized flooding, wildland fires, and an increased number of high heat days. Many of the guiding policies and policies in this element correspond to local and regional safety priorities such as those established in the Contra Costa County Hazard Mitigation Plan (CCCHMP), a multi-jurisdictional document that helps coordinate more than three dozen participating jurisdictions to reduce risk from the most prevalent natural disasters in the county. Likewise, many of the guiding policies and policies will correspond with the City's Emergency Operations Plan.

PROPOSED SAFETY ELEMENT GUIDING POLICIES, POLICIES, AND PROGRAMS

Guiding Policies and supportive policies and programs of the proposed General Plan Safety Element are shown in Table 2-7.

Table 2-7 San Ramon Safety Element Guiding Policies, Policies, and Programs

ID #	Goals and Supportive Policies/Programs
9.1-G-1	**Maintain and update the emergency mitigation, preparedness, response, and recovery components of the emergency management procedures in San Ramon.**
9.1-I-1	Maintain and update the City's Emergency Operations Plan, as required by State and Federal laws, to minimize the risk to life and property from seismic and geologic hazards, hazardous materials and waste, fire, landslide, dam failure, flood, and national security emergency.
9.1-I-2	Coordinate with the San Ramon Valley Citizens Council, the San Ramon Valley Fire Protection District, and other organizations and agencies to maintain and disseminate emergency preparedness information via NixleAlerts, social media, and community meetings.
9.1-I-3	Coordinate regular exercises and drills with emergency organizations. Provide training opportunities for all City staff to be adequately trained to Federal, State, and local procedures.
9.1-I-4	Require new residential development in identified high risk hazard areas to provide a minimum of two emergency evacuation routes.
9.1-I-5	Support regular evacuation trainings with identified single-access residential developments, identified in Figure 9-2, typically including evacuation information, emergency supply lists, and first aid resources.
9.1-I-6	Proactively engage with identified single-access residential developments, identified in Figure 9-2, to encourage home retrofits to meet current building standards on structure hardening.
9.1-I-7	Prioritize outreach efforts and work with local agencies and organizations during hazardous events to address the specific needs of populations most affected and/or unable to easily adapt in the community such as seniors, young children, individuals with physical disabilities, and communities with single –access residential developments, identified in Figure 9-2.
9.1-I-8	Work with the San Ramon Valley Fire Protection District to identify and update the Evacuation Plan, at a minimum, every eight years to account for all types of emergencies.
9.2-G-1	**Minimize risks of personal injury and property damage posed by geologic and seismic hazards.**
9.2-I-1	Review proposed development sites during the planning process to identify and mitigate any potential geologic or seismic hazards.
9.2-I-2	Require the preparation of a fault investigation study to identify appropriate setbacks for any proposed structure intended for human occupancy within 50 feet of an active fault trace.
9.2-I-3	Where appropriate, require an independent registered engineering geologist or geotechnical engineer to review geotechnical reports submitted by applicants on sites in seismically hazardous areas.

ID #	Goals and Supportive Policies/Programs
9.2-I-4	Require comprehensive geologic and engineering studies prior to construction of critical structures regardless of location.
9.2-I-5	Require geotechnical field review during the construction phase of any new development as determined by the City Engineer.
9.2-I-6	Require, where appropriate, preparation of a soils report as part of the development review and/or building permit process.
9.2-I-7	Limit cut-and-fill slopes to 3:1 (33 percent slope) except where an engineering geologist or geotechnical engineer can establish to the satisfaction of the City Engineer that a steeper slope would not pose undue risk to people and property.
9.2-I-8	Blend cut-and-fill slopes with existing contours to avoid the appearance of artificial slopes.
9.2-I-9	Provide information and establish incentives for property owners to rehabilitate existing buildings using construction techniques to protect against seismic hazards.
9.2-I-10	Control erosion of graded areas with revegetation or other acceptable methods.
9.2-I-11	Require financial protection for public agencies and individuals as a condition of development approval where geologic conditions indicate a potential for high maintenance costs for areas of public benefit.
9.2-I-12	Encourage continued investigation by State agencies of geologic conditions within the City's Planning Area to promote public awareness of potential geologic and seismic hazards.
9.2-I-13	Review and update, as appropriate, City Code requirements for excavation, grading, and filling to ensure that they conform to current Federal, State, and regional standards.
9.3-G-1	**Minimize the risk of property damage and personal injury resulting from the production, use, storage, disposal, or transportation of hazardous materials.**
9.3-I-1	Promote the reduction, recycling, and safe disposal of household hazardous wastes through public education and awareness.
9.3-I-2	Continue to provide convenient, local opportunities for household hazardous waste (HHW) drop-off and pick-up service to San Ramon residents.
9.3-I-3	Require the clean-up of sites contaminated with hazardous substances.
9.3-I-4	Support and implement policies contained in the Contra Costa County Hazardous Waste Management Plan that encourage and assist the reduction of hazardous waste from businesses and homes in San Ramon.
9.3-I-5	Require businesses generating hazardous waste to pay necessary costs for local implementation of programs specified in the County Hazardous Waste Management Plan, as well as the costs associated with emergency response services for a hazardous materials release.
9.3-I-6	Work with the San Ramon Valley Fire Protection District and Contra Costa County to minimize potentially dangerous conditions from storing, dispensing, using and handling of hazardous materials.
9.4-G-1	**Protect the community from risks to lives and property posed by flooding and stormwater runoff.**
9.4-I-1	Reduce hazards caused by local flooding through improvements and ongoing maintenance to the storm drain system and/or creek corridors.
9.4-I-2	Identify or develop a new forecast-based tool to address the need for increasing frequency of model calibration of high frequency flood events (e.g. 10-year floods) to better understand how climate change will impact these flooding events.
9.4-I-3	Require new development to prepare hydrologic studies to assess storm runoff impacts on the local and subregional storm drainage systems and/or creek corridors. New development shall implement all applicable and feasible recommendations from the studies.

ID #	Goals and Supportive Policies/Programs
9.4-I-4	Require new development to provide a funding mechanism for ongoing maintenance of drainage facilities and other stormwater control measures. Maintenance may be by the City under contract, or by a private entity.
9.4-I-5	Establish landscape and maintenance guidelines for required detention basins to ensure that such facilities achieve a look and quality that is consistent with the landscape of San Ramon and applicable regulatory requirements.
9.4-I-6	Maintain flood insurance rate maps and post for public education.
9.4-I-7	Explore new funding mechanisms for enhancing the riparian environment and converting, where possible, flood control channels back to a more natural setting while keeping the existing uses and maintaining sufficient carrying capacity of the channels.
9.4-I-8	All new developments shall not increase runoff to the 100-year peak flow in the City's flood control channels or to local creeks and shall be substantially equal to pre-development conditions. All new storm water systems shall be in compliance with the requirements of the City's Stormwater Municipal Regional Permit issued by the San Francisco Regional Water Quality Control Board.
9.4-I-9	New development shall be required to locate buildings above the one percent annual flood chance (100-year flood) floodplain and outside the special flood hazard area to minimize potential flood damages.
9.5-G-1	**Minimize the risks to lives, property, and natural environment due to fire hazards.**
9.5-I-1	Require site design features, where appropriate based on a wildfire risk assessment, and fire retardant building materials to reduce the risk of fire within the City.
9.5-I-2	Require the completion of a Fire Protection Plan for new development adjacent to a Fire Hazard Area and within designated High Fire Hazard Areas in order to determine which mitigation measures are appropriate to minimize fire hazard.
9.5-I-3	Work with the Fire Protection District on planning for a new training facility at an appropriate location where neighborhood impacts would be mitigated
9.5-I-4	Require sprinklers in new homes, as required by the California Building Code.
9.5-I-5	Require sprinklers in all mixed-use development, as required by the California Building Code.
9.6-G-1	**Build a community that is resilient against the effects of climate change and protects all City residents, including the most vulnerable residents.**
9.6-I-1	Identify appropriate public facilities to be designated as Resilience Hubs by providing resources such as cooling, power, or water which may not be accessible to all of the population in San Ramon during events of extreme heat, drought, flooding, or other natural disasters.
9.6-I-2	Explore options to support community-wide installation of self-sufficient energy systems, such as microgrids, at critical facilities and other critical emergency service facilities to minimize service disruptions during power outages.
9.6-I-3	Provide educational materials (e.g., websites, social media) and programs to support water conservation efforts that take into account extended drought conditions.
9.6-I-4	Promote home cooling retrofits such as residential battery storage, rooftop solar, and heat pumps to homes to better withstand extreme heat and reduce the impact of bad air quality days.
9.6-I-5	Utilize drought-tolerant green infrastructure projects including street trees and landscaped areas and encourage installation of green roof systems as part of cooling strategies in public and private spaces to help reduce the heat island effect and energy demand during extreme heat events.
9.6-I-6	Prioritize regional solutions with public and private partners, including EBMUD and DSRSD, to diversify the City's water supply through utilizing alternative sources, including recycled water.
9.6-I-7	Assess existing critical facilities and ensure new critical facilities are in minimal risk areas to hazards.

ID #	Goals and Supportive Policies/Programs
9.6-I-8	Promote efforts by the Bay Area Air Quality Management District (BAAQMD) and public utility providers to reduce emissions from energy consumption.
9.6-I-9	Invest in sustainable backup power sources to provide redundancy and continued services for critical facilities during periods of high demand during extreme heat events or possible outages because of safety power shut offs and extreme weather.

Source: San Ramon, City of. 2023. San Ramon Draft 2040 General Plan Safety and Hazards Element.

Open Space and Conservation Element

The Open Space and Conservation Element, another component of the current General Plan, would also be updated. This element encourages rural conservation through compatible development that preserves natural features, sensitive habitats, and agricultural resources. This element also includes policies to preserve and enhance water quality in the San Ramon Planning Area. Finally, the preservation of archaeological, paleontological, and historic resources is also an important goal of this General Plan, and relevant policies are included in this element.

PROPOSED OPEN SPACE AND CONSERVATION ELEMENT GUIDING POLICIES, POLICIES, AND PROGRAMS

Guiding Policies and supportive policies and programs of the proposed General Plan Open Space and Conservation Element are shown in Table 2-8.

Table 2-8 San Ramon Open Space and Conservation Element Goals, Policies, and Programs

ID #	Goals and Supportive Policies/Programs
8.1-G-1	**Protect and maintain the quality of biological resources in the San Ramon City limits, while also balancing the needs of growth and development.**
8.1-I-1	Continue to require new land use and development activities to comply with applicable laws and regulations concerning special status species.
8.1-I-2	When special status species and/or critical habitat may be adversely affected by land use or development activities, require appropriate and feasible mitigation measures in accordance with regulatory agency guidance.
8.1-I-3	Monitor and, as appropriate, engage regulatory agencies on any proposals to designate critical habitat and/or other special-status species protection designations within the city.
8.1-I-4	Consider the rights of private property owners during the biological review process and encourage mutually acceptable solutions to special status species and/or critical habitat protection.
8.1-I-5	Require erosion control plans for proposed new development that require significant grading or are near streams, wetlands, and riparian areas. The plans shall include recommendations for grading practices that prevent erosion, loss of topsoil, and scour of drainageways, consistent with biological and aesthetic values.
8.3-G-1	**Acquire, preserve, and maintain open space and its natural resources for future generations.**
8.3-G-2	**Strengthen the City's partnership with East Bay Regional Parks District, Contra Costa County, other jurisdictions and private organizations to expand the ridgeline and hillside open space system in the city.**
8.3-I-1	Preserve, protect, and maintain significant native oak woodlands.
8.3-I-2	Enhance San Ramon's creeks and riparian corridors by requiring preservation or replacement of riparian vegetation, as appropriate and in conformity with regulatory requirements.

ID #	Goals and Supportive Policies/Programs
8.3-I-3	Explore opportunities to preserve significant creek, riparian areas, sensitive natural communities, and prominent topographic features as open space.
8.3-I-4	Require maintenance plans for open space areas in new development proposals, including identified natural resources such as ridges and waterways.
8.3-I-5	Through the development review process, encourage wildlife corridors to provide connectivity between established open space areas, where deemed appropriate.
8.3-I-6	New development shall provide open space through the dedication of land (as appropriate), through the use of an irrevocable instrument, or payment of impact fees.
8.3-I-7	Confer with appropriate agencies and organizations to ensure that all development, including Dougherty Valley, the Westside subareas, and any other future development provides adequate mitigation for any impacts to special status species, wetlands, and significant natural biotic communities.
8.3-I-8	Encourage public access to creek corridors.
8.3-I-9	Consider alternatives to culverting or channelization of waterways during all stages of the review process.
8.3-I-10	Promote maintenance and protection of waterways through the use of Geologic Hazard Abatement District(s), conservation easements, endowments, special assessments, or other appropriate mechanisms.
8.3-I-11	Continue participation in the Contra Costa Clean Water Program to control stormwater pollution and protect the quality of the City's waterways.
8.3-I-12	Monitor the condition of waterways within the city limits and take proactive measures to prevent degradation.
8.3-I-13	Implement existing viewshed criteria to manage views of the natural hillsides surrounding San Ramon.
8.3-I-14	Maintain regulations for the protection and preservation of hillsides, creeks, and ridgelines as shown in Figure 8-3.
8.3-I-15	Implement the slope methodology standards in the Zoning Ordinance to implement the resource management policies.
8.3-I-16	Preserve ridgelines as open space, except for ridgelines that may be altered, as shown in Figure 8-3.
8.3-I-17	Preserve hillsides steeper than 20 percent slope as open space, except for slopes and ridgelines that may be altered, as shown in Figure 8-3.
8.4-G-1	**Support regional efforts to expand the ridgeline and hillside open space system through joint efforts with East Bay Regional Parks District, Contra Costa County and nonprofit trustee agencies.**
8.4-I-1	Confer with appropriate agencies and organizations in the creation of an institutional framework and financing mechanisms necessary to acquire additional ridgeline areas and agricultural lands, and to preserve, restore, and manage important open space.
8.4-I-2	Encourage developers to explore Transfer of Development Rights (TDRs) in conjunction with project review to cluster residential development and preserve open space, ridgelines, and creek corridors.
8.4-I-3	Utilize GHADs and/or other secure funding mechanisms for open space to assist in the acquisition and on-going management, operation, and maintenance of a ridgeline and hillside open space system.
8.4-I-4	Continue to support the efforts of the Open Space Advisory Committee to recommend measures to protect and preserve Open Space in and contiguous to San Ramon.
8.4-I-5	Revise and update the Municipal Code as necessary to require best practices that reduce soil erosion and minimize or eliminate the effects of grading on loss of topsoil.
8.4-I-6	Use open space in new development to create buffers that delineate the edge of urban areas.

ID #	Goals and Supportive Policies/Programs
8.4-I-7	Encourage the restoration of open space areas as part of new development projects, as appropriate.
8.4-I-8	Explore funding opportunities to restore habitat on publicly owned open space and to provide assistance, where appropriate, to owners of privately owned land dedicated as permanent open space, to facilitate private restoration effort.
8.4-I-9	Prioritize the preservation of open space on lands that are for sale, proposed for development, or can be acquired that have high biological and ecological value, contiguous to existing open space properties or public lands, and provide recreational opportunities such as trail connections.
8.4-I-10	Continue planning and managing ridgelines, agricultural lands, and open space acquired by the City or other Open Space areas through the Geologic Hazard Abatement District(s) and the Dougherty Valley Open Space Management Plan.
8.4-I-11	Provide incentives for clustering of allowable residential use on infill open space sites to avoid unnecessary grading and site development inconsistent with General Plan policies for open space and resource conservation.
8.4-I-12	Confer, through the development review process, with appropriate agencies and organizations to create a connecting region-wide open space system using instruments such as land dedication or public access easements.
8.4-I-13	Allow appropriate and beneficial improvements on open space lands, subject to standards for environmental protection; city hillside, ridgeline, and creek regulations; avoidance of hazards; and building siting and design that will preserve the open space character of the site. Improvements may include work related to the Geologic Hazard Abatement District, trails, or replanting of native plants.
8.4-I-14	Promote the planting of local native trees and shrubs where development occurs on land surrounding reservoirs and streams, especially adjacent to areas where banks or channels have been modified for flood protection.
8.5-G-1	**Encourage the continuation of appropriate agricultural activities within the City's Planning Area, while being cognizant that such uses may transition to non-agricultural uses in the future.**
8.5-I-1	If Important Farmland is proposed to be converted to non-agricultural use, require evaluation to determine significance of conversion impacts. If the conversion is found to be significant, require mitigation to offset such impacts.
8.5-I-2	Process development applications involving land encumbered by Williamson Act contracts only if three years or less remain prior to expiration or cancellation of the contract.
8.5-I-3	Minimize land use conflicts between agricultural and urban uses through site planning techniques.
8.5-I-4	Explore opportunities with East Bay Regional Park District (EBRPD), other government agencies, or private organizations to set aside and manage undeveloped lands as open space that are contiguous and sufficient in size to allow continued agricultural uses.
8.5-I-5	Designate land for rural conservation along the west side of Bollinger Canyon Road near the Las Trampas Regional Wilderness in order to preserve visual open space, to provide opportunities for horse-keeping and part-time ranching, and to maintain compatibility with adjoining agricultural uses.
8.6-G-1	**Promote the implementation of water quality and conservation programs and measures by San Ramon employers, residents, and public agencies.**
8.6-I-1	Require new development projects to implement indoor water conservation and demand management measures consistent with building code standards and Climate Action Plan policies.
8.6-I-2	Require new development projects to implement outdoor water conservation and demand management measures.
8.6-I-3	New development in areas where recycled water service exists or is planned shall be plumbed with "purple pipe" and other measures necessary to accommodate non-potable water service.

ID #	Goals and Supportive Policies/Programs
8.6-I-4	Require new development to meet the State Model Water Efficient Landscape Ordinance (MWELO).
8.6-I-5	Collaborate with DERWA (Dublin San Ramon Services District and East Bay Municipal Utilities District Recycled Water Authorities) to expand the recycled water distribution system in an efficient and timely manner.
8.6-I-6	Continue implementation of the City of San Ramon Stormwater Management Program to reduce storm water pollution, provide public education, and to protect the water quality of the City's local creeks and streams. Promote the reduction of storm water pollution through the construction and maintenance of joint treatment facilities and other partnerships between the City and private property owners.
8.6-I-7	Promote the protection of groundwater resources by collaborating with agencies that monitor and oversee clean-up efforts at existing sources of pollution.
8.7-G-1	**Identify, evaluate, and preserve the archaeological, paleontological, and historic resources that are found within the San Ramon Planning Area.**
8.7-I-1	Protect paleontological resources prior to the beginning of projects involving ground disturbance in geologic units with high paleontological sensitivity and implement identified mitigation prior to and during construction.
8.7-I-2	Prepare Historical Resources Evaluation for projects involving structures 45 Years or older and implement identified mitigation prior to and during construction.
8.7-I-3	Conduct Archaeological Resources Assessment prior to project approval and implement identified mitigation prior to and during construction and include a policy to stop work in the event of unanticipated cultural resources discoveries during construction.
8.7-I-4	Protect and maintain the integrity of officially listed historic resources.
8.7-I-5	Review any proposals to nominate local resources for eligibility for listing on national or state historic registers.
8.7-I-6	As a standard condition of approval, require all development projects involving grading and excavation to implement appropriate measures in the event that burial sites or human remains are encountered during earthwork activities.
8.7-I-7	Perform required consultation with the appropriate tribal organization(s) as part of projects subject to the California Environmental Quality Act (CEQA). For projects involving a General Plan Amendment, the development of a Specific Plan (or amendment), or designating open space, provide for tribal consultation opportunities in accordance with state law.
8.7-I-8	Require tribal monitor(s) during all activities in areas with cultural resources of interest to local Native American tribes when requested. Cultural resources may include a sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine. Both monitors shall observe grading, ground-disturbing, and other earth-moving activities.

Source: San Ramon, City of. 2023. San Ramon Draft 2040 General Plan Open Space and Conservation Element.

Parks and Recreation Element

The Parks and Recreation Element, another component of the current General Plan, would also be updated. The City's current standard for public parkland is 6.5 acres per 1,000 residents at General Plan buildout. Of the total 6.5 acres per 1,000 residents, at General Plan buildout, a goal of 4.5 acres per 1,000 residents is for, neighborhood and school parks and 2.0 acres per 1,000 residents is for community parks and specialized recreation areas. While this parkland standard exceeds the fees which can be collected under California Government Code Section 66477 (Quimby Act), San Ramon makes up for the difference in fees by other funding methods. This public parkland standard is achievable under the General Plan if the City is successful in securing the proposed public parkland through dedication and City efforts.

PROPOSED PARKS AND RECREATION ELEMENT GUIDING POLICIES, POLICIES, AND PROGRAMS

Guiding Policies and supportive policies and programs of the proposed General Plan Parks and Recreation Element are shown in Table 2-9.

Table 2-9 San Ramon Parks and Recreation Element Goals, Policies, and Programs

ID #	Goals and Supportive Policies/Programs
6.5-G-1	**Create and maintain a high-quality publicly accessible park and trail system for San Ramon.**
6.5-I-1	Maintain a guideline of 6.5 acres of public parks per 1,000 residents at General Plan buildout.
6.5-I-2	Provide varied community park and recreational opportunities accessible to all City residents.
6.5-I-3	Maintain a minimum size of 2 acres or more for neighborhood parks.
6.5-I-4	Provide passive and active recreational amenities within the City's parks to meet the needs of citizens of all ages and interests.
6.5-I-5	Require residential developers to make dedications of land, improvements, and/or in-lieu fees to the City's park and trail system.
6.5-I-6	Encourage contributions to the City's park and trail system by non-residential developers.
6.5-I-7	Encourage property owners in the City Core to implement the Interconnected Opportunities of the San Ramon Parks, Open Space, Trails, and Recreation Master Plan and the Walking District Master Plan which provides the long-term vision for pedestrian-oriented access and connectivity.
6.5-I-8	Complete all parkland dedication requirements for each development prior to final occupancy.
6.5-I-9	Encourage the development of landscaped and dedicated public spaces, parkways, trail systems, and special community service recreational facilities in new developments.
6.5-I-10	Collaborate with the San Ramon Valley Unified School District to promote continued joint development and use of school sites and facilities located within the City and its Sphere of Influence.
6.5-I-11	Seek partnership opportunities with the private sector and with other public agencies to enhance park facilities and provide recreational activities.
6.5-I-12	Identify, document, and seek to preserve and protect sites of historic interest.
6.5-I-13	Seek opportunities to preserve and protect open space, ridge lands, and scenic corridors in and around San Ramon.
6.5-I-14	Designate Big Canyon within the Westside subarea as a nature preserve and seek to add it to the City's park system as a specialized recreation area with limited access.
6.5-I-15	Continue to review annually and update every five years the 10-year Parks and Community Services Master Plan.
6.5-I-16	Maintain service levels and maintenance standards in parks and recreation facilities at optimal levels for public use, safety, and cost effectiveness.
6.5-I-17	Increase the connectivity to the Iron Horse Trail and the regional/city trail network, including the installation of bicycle/pedestrian overcrossing(s), seating, and shade structures as described in the San Ramon Valley Iron Horse Trail Corridor Concept Plan.
6.5-I-18	Encourage new development to provide Public Spaces to enhance the recreation or leisure interactive experience of residents or visitors for passive or active use. The City may allow for partial or full parkland dedication credit for these types of Public Spaces based on City need and community benefit to the general public.

Source: San Ramon, City of. 2023. San Ramon Draft 2040 General Plan Parks and Recreation Element.

Public Facilities and Utilities Element

The Public Facilities and Utilities Element, another component of the current General Plan, would also be updated. This Element identifies the capital improvements and facilities needed to serve San Ramon, including civic, educational, cultural, fire, and police facilities, as well as utilities and communication systems. This Element also sets forth standards desired by the community for its public schools, private institutions, public utilities, and solid waste management.

PROPOSED PUBLIC FACILITIES AND UTILITIES ELEMENT GUIDING POLICIES, POLICIES, AND PROGRAMS

Guiding Policies and supportive policies and programs of the proposed General Plan Public Facilities and Utilities Element are shown in Table 2-10.

Table 2-10 San Ramon Public Facilities and Utilities Element Guiding Policies, Policies, and Programs

ID #	Goals and Supportive Policies/Programs
7.1-G-1	**Provide public and cultural facilities that contribute to the City's positive image and enhance community identity.**
7.1-I-1	Confer with Contra Cost County Library to provide adequate services including facility upgrades and enhancements in response to community needs.
7.2-G-1	**Collaborate with the San Ramon Valley Unified School District in their efforts to ensure that all school age children have equal access to equitable facilities.**
7.2-I-1	Collaborate with the San Ramon Valley Unified School District to ensure that all future public school sites are developed in partnership with the City as a public "school park."
7.2-I-2	Continue to partner with Diablo Valley College (DVC) to support community access at the DVC – San Ramon Campus Library to meet the needs of the Facility, Students, and Community.
7.2-I-3	Maintain after school teen services on or adjacent to middle school sites.
7.2-I-4	Collaborate with the San Ramon Valley Unified School District to assure that all future schools are planned to be open and operational based on student generation rates.
7.3-G-1	**Encourage development of private educational, cultural, childcare, and medical facilities in San Ramon.**
7.3-I-1	Encourage developers of residential projects to participate in Community Facilities Districts and encourage developers of nonresidential and commercial projects to participate in Benefit Improvement Districts.
7.3-I-2	Facilitate the provision of safe, affordable, and quality elder care and child care facilities and services for families who reside or work in San Ramon.
7.3-I-3	Actively work with public, private, and non-profit service providers to create and expand opportunities for elder care facilities, programs, and services in San Ramon.
7.3-I-4	Encourage the construction of senior housing and recreational opportunities for senior citizens near City services and facilities, including transportation corridors; particularly within the City's core and the Senior Housing Overlay area.
7.3-I-5	Encourage the location of appropriate child care facilities in residential areas and ensure that such operations are compatible with their surroundings.
7.3-I-6	Assess the adequacy of the School-Aged Child Care Ordinance through periodic review and update as necessary to ensure that fees are used appropriately.
7.3-I-7	Provide opportunities to locate meeting facilities (public or private), preschool facilities, and child care facilities in residential areas on arterial or collector streets.
7.3-I-8	Encourage and support public facilities and services that contribute to the maintenance and long-term success of community medical service facilities.

ID #	Goals and Supportive Policies/Programs
7.3-I-9	Encourage uses which support the medical facilities within proximity of community medical service facilities.
7.4-G-1	**Ensure the provision of adequate utility systems and communication for existing and future residents and the business community.**
7.4-I-1	Coordinate with Pacific Gas and Electric Company (PG&E) and Martin Clean Energy (MCE) in their efforts to monitor future utility expansion to ensure that facilities are designed and planned with minimal impact on existing and future residents.
7.4-I-2	Work with PG&E to improve transmission line corridors with attractive, community-serving uses and to upgrade the appearance of the transmission line corridors in conjunction with an expansion or co-use of the corridor.
7.4-I-3	Require new development to underground all utility lines needed to serve the future buildings and their occupants.
7.4-I-4	Continue to coordinate with PG&E to underground utilities in existing residential neighborhoods, making the Southern San Ramon area a priority.
7.4-I-5	Continue to explore opportunities to underground existing overhead utility lines throughout the City with available funding.
7.4-I-6	Continue to monitor cable video and encourage competition to ensure the highest quality service consistent with Federal Communications Commission guidelines).
7.4-I-7	Encourage utility providers to foster better access, use, and distribution of multi-media products, including fiber optics, wireless technologies, and satellite communications.
7.4-I-8	Encourage all new development to provide the technology to support multiple telecommunications facilities and providers.
7.4-I-9	Continue to review and update, as necessary, the regulations for wireless telecommunication facilities to ensure minimal impacts to the community.
7.4-I-10	Develop procedures and regulations to ensure minimal impacts to the community from the installation of utilities on City streets.
7.4-I-11	Encourage co-location of telecommunication facilities to minimize potential visual impacts to the community.
7.4-I-12	Coordinate sub-surface utility work with road improvements and maintenance and enforce the City's pavement cut moratorium whenever possible.
7.5-G-1	**Manage solid waste so that State goals are met or are exceeded and the best possible service is provided to the citizens and businesses of San Ramon.**
7.5-I-1	Provide the best possible service for the collection of garbage, recyclables, and green waste that provides the best value to residents and businesses.
7.5-I-2	Provide and promote opportunities to reduce waste in all sectors of San Ramon, including residential, commercial, non-profit, government, and educational sectors.
7.5-I-3	Develop consumer friendly, convenient, affordable options for community-serving recycling services.
7.5-I-4	Through the development review process, encourage the provision of convenient recyclable material storage locations acceptable to the waste provider.
7.5-I-5	Comply with State requirements for proper handling and storage of solid waste, recyclables, and hazardous materials, diversion of solid waste from landfills, and provision of programs to make these activities feasible.
7.5-I-6	Ensure that solid waste programs effectively address community needs and issues.
7.5-I-7	Provide options for the safe disposal of hazardous waste and materials.
7.5-I-8	Require solid waste diversion (e.g. waste prevention, reuse, recycling, and composting).

ID #	Goals and Supportive Policies/Programs
7.5-I-9	Require new development projects to comply with the Municipal Code's construction and demolition debris diversion requirements.
7.5-I-10	Provide convenient recycling opportunities at large public events and venues.
7.5-I-11	Promote public and private efforts to recycle electronic waste.
7.6-G-1	**Collaborate with the San Ramon Valley Fire Protection District to deliver a high level of public protection services that protect life, property, and the environment.**
7-6-I-1	Continue to coordinate with the San Ramon Valley Fire Protection District to provide adequate fire protection facilities and services to meet the needs of the community.
7-6-I-2	Seek input from the San Ramon Valley Fire Protection District to ensure that fire protection measures are identified during the development review process.
7.7-G-1	**Maintain a high level of public safety for all people who live or work in San Ramon.**
7.7-I-1	Ensure crime-reduction and public safety features are incorporated into the design of new development projects through the Crime Prevention Through Environmental Design program (CPTED).
7.7-I-2	Monitor new development projects in the unincorporated parts of the San Ramon Planning Area that would require law enforcement services from the City.
7.7-I-3	Require new development, if appropriate, to provide a funding mechanism to support and maintain San Ramon's high level of police services., such as a Community Facilities District.

Source: San Ramon, City of. 2023. San Ramon Draft 2040 General Plan Public Facilities and Utilities Element.

Noise Element

The purpose of San Ramon's Noise Element is to set forth policies that regulate the ambient noise environment and protect residents from exposure to unacceptable noise levels. Noise is especially a concern for noise–sensitive uses such as residences, schools, churches, and hospitals. Noises vary widely in their scope, source, and volume, ranging from individual occurrences such as leaf blowers, to the intermittent disturbances of overhead aircraft, to the fairly constant noise generated by traffic on freeways. Impacts from noise can cause minor issues such as annoyance and interruptions, to more serious concerns like increasing risk of cardiovascular disease and other secondary impacts of sleep deprivation.

NOISE CONTOURS ASSESSMENT

City noise characteristics are described within the 2040 General Plan Safety Element including descriptions of common sources of noise as well as goals and policies to lessen noise for sensitive land uses (e.g., residences, schools, medical facilities). As required pursuant to the Governor's Office of Planning and Research (OPR) Guidelines, the Safety Element also includes a map of noise contours as depicted via lines that represent equal levels of noise exposure across the City. Noise contours information informs planning decisions, including siting of potential future sensitive land uses.

PROPOSED NOISE ELEMENT GUIDING POLICIES, POLICIES, AND PROGRAMS

Guiding Policies and supportive policies and programs of the proposed General Plan Noise Element are shown in Table 2-11.

Table 2-11 San Ramon Noise Element Guiding Policies, Policies, and Programs

ID #	Goals and Supportive Policies/Programs
10.1-G-1	**Achieve an acceptable noise environment for the present and future residents of San Ramon.**
10.1-I-1	Minimize vehicular noise sources, stationary noise sources, and noise emanating from intermittent activities.
10.1-I-2	All projects where people are exposed to noise greater than "normally acceptable" levels indicated in Figure 10-2 shall be required to submit a noise analysis. Applicable Noise attenuation measures shall be implemented with the DNL reduced to 45 Db in all habitable rooms.
10.1-I-3	Require all necessary acoustical and vibration studies be prepared by qualified professionals in accordance with industry-accepted methodology. All applicable and feasible vibration reduction measures shall be incorporated into projects.
10.1-I-4	Alternatives to sound walls such as building orientation and landscaped buffers shall be considered during the design process. If deemed appropriate, sound walls with factors such as height, decorative features, graffiti resistance, pedestrian mobility, and sight distances considered.
10.1-I-5	New development shall minimize their noise impacts on adjacent properties through appropriate means, including, but not limited to, the following actions: ▪ Screen and control noise sources, such as parking and loading facilities, outdoor activities and mechanical equipment, ▪ Increase setbacks for noise sources from adjacent dwellings, ▪ Retain or install fences, walls, and landscaping that serve as noise buffers, ▪ Use soundproofing materials and other building practices or materials, ▪ Encourage the use of commute alternatives, ▪ Control hours of operation, including deliveries and trash pickup, to minimize noise impacts, and ▪ Buffer noise along highways and arterial roadways through natural noise buffers and if necessary, install sound walls when compatible with neighborhood aesthetics and character.
10.1-I-6	Protect sensitive receptors such as schools, hospitals, and senior care uses from excessive noise through implementation of noise attenuation measures for new development.
10.1-I-7	Implement the City's noise control standards to ensure appropriate regulation of common residential, commercial, and industrial noise sources.
10.1-I-8	Require new noise sources to use best available and practical control techniques to minimize noise from all sources.
10.1-I-9	Continue to enforce the City's Noise Ordinance to reduce noise impacts.
10.1-I-10	Review and update the Noise Ordinance, as needed, to improve the City's ability to reduce noise impacts.
10.1-I-11	Designate walking districts in which new developments will be encouraged to provide facilities which support the use of alternative transportation modes such as walking, bicycling, carpooling and, where applicable, transit to reduce peak-hour traffic and vehicular noise.
10.1-I-12	Designate and enforce local truck routes to minimize truck traffic in noise-sensitive land use areas.
10.1-I-13	Encourage mixed-use and commercial developments to locate noise generating components such as loading areas, parking lots, driveways, trash enclosures, mechanical equipment, and other noisier components away from residential development.
10.1-I-14	Construction activities are exempt from the standards set forth in Figure 10-2, but must implement all practical noise attenuation measures and practices to limit adverse impacts on nearby land uses.
10.1-I-15	Require evaluation of potentially harmful noise sources such as pure tones. Prohibit or place restrictions on such sources if the evaluation indicates that they may be harmful.

ID #	Goals and Supportive Policies/Programs
10.1-I-16	For purposes of city analyses of noise impacts, and for determining appropriate noise mitigation, a significant increase in ambient noise levels is assumed if the project causes ambient noise levels to exceed the following: ▪ The ambient noise level is less than 60 dB L dn and the project increases noise levels by 5 dB or more. ▪ The ambient noise level is 60-65 dB L dn and the project increases noise levels by 3 dB or more ▪ The ambient noise level is greater than 65 dB Ldn and the project increases noise levels by 1.5 dB or more.
10.1-I-17	Require disclosure of potential significant noise impacts as part of real estate developments and transfers of land ownership within areas zoned for Mixed-Use development.
10.1-I-18	Require new projects to mitigate to below Federal Transit Administration-recommended criteria for potential building architectural damage for ground-borne vibration at nearby residential and commercial uses, and implement vibration control measures in areas of infill development as necessary.
10.1-I-19	Protect sensitive receptors including residential land uses, hospitals, convalescent homes, schools, churches, and sensitive wildlife habitat including rare, threatened, or endangered species by measuring noise at multiple receptors for future projects that have the potential to exceed the CNEL normally acceptable decibel levels and require mitigation to reduce noise levels to acceptable levels.

Source: San Ramon, City of. 2023. San Ramon Draft 2040 General Plan Noise Element.

Air Quality and Greenhouse Gas Element

The Air Quality and Greenhouse Gas Element provides a platform within the General Plan for local action to address regional, State and federal air quality and climate change concerns. Local government will play a role in the successful implementation of AB 32. The California Air Resources Board (CARB) recognized the importance of local action and recommended a reduction in greenhouse GHG emissions by 40 percent from 1990 levels, and substantially advance toward our 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels. The proposed reduction will ensure that municipal and community-wide emissions are consistent with the State's reduction targets.

PROPOSED AIR QUALITY AND GREENHOUSE GAS ELEMENT GUIDING POLICIES, POLICIES, AND PROGRAMS

Guiding Policies and supportive policies and programs of the proposed General Plan Air Quality and Greenhouse Gas Element are shown in Table 2-12.

Table 2-12 San Ramon Air Quality and Greenhouse Gas Element Guiding Policies, Policies, and Programs

ID #	Goals and Supportive Policies/Programs
12.4-G-1	**Work with the California Air Resources Board and the Bay Area Air Quality Management District to improve air quality in the region and San Ramon to meet State and federal ambient air quality standards.**
12.4-I-1	Comply with standards set by local and regional agencies to achieve and maintain air quality standards that are consistent with State law.
12.4-I-2	Encourage coordination with the California Air Resources Board (CARB) and the Bay Area Air Quality Management District (BAAQMD) in monitoring the City's progress in meeting greenhouse gas emissions targets
12.4-I-3	Utilize the CEQA process for applicable regulatory guidance; such as the BAAQMD's CEQA Air Quality Guidelines to disclose potential air quality and climate change impacts from discretionary projects under City review.
12.4-I-4	Use the City's environmental review process to require mitigation measures, as applicable, consistent with the Climate Action Plan (CAP) for new development to reduce impacts from greenhouse gas emissions and hazardous air pollutants.
12.4-I-5	Comply with the regional Clean Air Plan by locally implementing BAAQMD best management practices and greenhouse gas reductions consistent with the targets identified in the San Ramon CAP.
12.4-I-6	Educate residents on the linkage between land use , transportation, and their impacts on water, energy use, and air pollution. Efforts should include educational materials through variety of effective and engaging platforms and venues.
12.5-G-1	**Reduce greenhouse gas emissions and improve air quality by encouraging development that integrates land use and transportation planning principles through the creation of compact, mixed-use neighborhoods that are bike and pedestrian-friendly.**
12.5-I-1	Minimize air pollution through project review, CEQA evaluation, and conditions of approval that are consistent with CAP GHG emissions targets and BAAQMD toxic air quality contaminant exposure thresholds.
12.5-I-2	Support and encourage projects proposing infill, and mixed-use development that create walkable and bicycle friendly neighborhoods and communities that increase access to transit.
12.5-I-3	Implement the Growth Management program to assess new development project impacts on transit plans and facilities to minimize impacts from greenhouse gases and air pollution.
12.5-I-4	Consider the City's jobs to housing ratio when approving development applications to reduce VMT to below the significance threshold.
12.6-G-1	**Utilize CEQA review and conditions of approval at the plan and project level to implement the Bay Area Air Quality Management District toxic air quality contaminant exposure criteria to minimize public exposure to hazardous air pollutants that impact public health.**
12.6-I-1	In accordance with BAAQMD Air Quality Guidelines, locate sources of hazardous emissions at appropriate distances from existing and planned sensitive land uses to minimize or avoid potential health risks to people that might result from hazardous air pollutant emissions.
12.6-I-2	Evaluate potential handling, storage, and transport of hazardous materials in new commercial and industrial developments to minimize public exposure to hazardous air pollutants.
12.6-I-3	Require construction and grading activities to include particulate emissions reduction measures in their Grading Manual Standards to limit fugitive dust and particulate pollution related to equipment.
12.6-I-4	Provide public information on the efforts by BAAQMD to reduce wood smoke pollution through informational handouts outlining health concerns related to increased fine particulate pollution, especially during wildfire and Spare the Air events.

ID #	Goals and Supportive Policies/Programs
12.6-I-5	Comply with BAAQMD CEQA guidance and thresholds as part of conditions of approval and CEQA review for plans and projects.
12.7-G-1	**Reduce greenhouse gas emissions by shifting to multi-modal transportation systems, and zero-emission and low-emission vehicles and car-sharing programs by enhancing existing infrastructure and improving multi-modal infrastructure options.**
12.7-I-1	The City shall encourage participation in feasible, affordable, innovative and flexible employer-based trip reduction programs for employees and encourage employer and resident participation in employer-based trip reduction programs, including, but not limited to the BAAQMD Commuter Benefit Program.
12.7-I-2	City fleet vehicle managers shall develop and maintain a fiscally sound plan to transition to cleaner fleets with a conversion schedule, where feasible, enacted by an adopted Green Vehicle Procurement Policy.
12.7-I-3	Work with telecommunications companies to develop state-of-the-art telecommunications infrastructure within the city, including broadband access and neighborhood work centers for telecommuting to reduce vehicular commute travel and related emissions.
12.7-I-4	Provide information to encourage the use of transportation modes that minimize vehicle miles travelled and the resulting reduction in air pollution and greenhouse gas emissions.
12.7-I-5	Construct and promote infrastructure and facilities that support and encourages the use of low-emission transportation and alternative modes of travel, including safe and comprehensive bicycle and pedestrian system that connects all parts of the city and development standards that require installation of alternative fuel infrastructure, such as electric vehicle chargers and hydrogen fueling stations.
12.7-I-6	Invest in low-emission or zero-emission transportation infrastructure through Traffic Demand Management programs and incentivizing trip reduction programs to reduce traffic congestion and harmful pollutants generated from increased traffic and traffic congestion.
12.8-G-1	**Minimize emissions and potential climate change impacts related to energy consumption through government operations and the built environment**
12.8-I-1	Work with developers and homeowners to utilize high efficiency all-electric appliances and equipment in new and existing development projects within the city through implementation of on-going State building code standards.
12.8-I-2	Encourage resident and business participation in Marin Clean Energy (MCE), as a regional not-for-profit renewable electricity provider.
12.8-I-3	Work with developers during the design review phase to incorporate features to reduce the heat island effect and energy usage by shading buildings, homes, streets, and pedestrian walkways, such as increasing tree and vegetation cover, installing lighter colored building and roofing materials, and using cool pavements.
12.8-I-4	Sustain on-going efforts with utility providers, developers, and local water agencies to promote and encourage voluntary rebate programs that utilize efficient building designs and energy saving equipment in new and existing development projects within the city.
12.8-I-5	Encourage responsible development standards that, where reasonably available, use reclaimed water and non-potable water sources for particulate matter control, including landscaping and construction activities such as fugitive dust control. The development standards shall require new development areas that will be foreseeably served with recycled water to be plumbed with a "purple pipe" system to facilitate the future use of recycled water for landscape irrigation.
12.8-I-6	Encourage the use of recycled materials for construction and the efforts of the building industry, water and utility districts, and BAAQMD to promote enhanced energy conservation and sustainable building standards for new construction.

ID #	Goals and Supportive Policies/Programs
12.8-I-7	Work with local conservation organizations, local contractors and developers, and the building industry to revise or develop design standards that achieve energy efficiency, weatherization, and carbon neutral buildings relating to solar orientation, using remote sensors that adjust heating, cooling and lighting, cooling building materials, landscaping, use of cool paving surfaces, parking lot shading and other measures oriented towards reducing energy demand in the built environment.
12.8-I-8	Encourage use of materials developed with recycled materials as well as recycling and composting in order to reduce materials being sent to landfills.
12.8-I-9	Provide recycling programs to directly accept or connect construction companies with those who accept construction and demolition debris, and provide resources on where recycled materials can be procured for local use.
12.8-I-10	Engage with residents, businesses, haulers, solid waste facilities and local food banks to educate community members and stakeholders on SB 1383 requirements to reduce methane emissions that would otherwise be generated from disposed organic waste at landfills
12.9-G-1	**Reduce the City's proportionate contribution of greenhouse gas emissions derived from municipal operations.**
12.9-I-1	Strive to reduce greenhouse gas emissions from its internal governmental operations and land use activities within its authority 40 percent below 1990 levels by 2030 and reaching carbon neutrality by 2045. The City will also work with MTC to ensure that the City receives its proportionate fair share reduction in greenhouse gas emissions as may be identified under the provisions of SB 375 (2008 Chapter 728) for any projects or activities requiring approval by MTC.
12.9-I-2	Keep current and maintain the City's adopted Climate Action Plan (CAP) as an implementation strategy of the General Plan 2040.
12.9-I-3	Conduct regular reviews of San Ramon's progress towards meeting greenhouse gas emission reduction targets established in the San Ramon CAP by annually tracking and reporting on communitywide GHG emissions and updating the GHG emissions inventory and CAP every 4 to 8 years
12.9-I-4	Meet with other local and regional governments to assess federal and state programs and their impact on greenhouse gas emissions and mitigation efforts and revise the CAP as necessary.
12.9-I-5	Develop, adopt, and utilize a locally applicable CAP and CEQA significance thresholds consistent with BAAQMD CEQA GHG guidance for the evaluation of plan and project-level greenhouse gas emissions impacts and implementation of identified mitigation

Source: San Ramon, City of. 2023. San Ramon Draft 2040 General Plan Air Quality and Greenhouse Gas Element.

Growth Management Element

The Growth Management Element, another component of the current General Plan, will also be updated. The Growth Management Element includes guiding policies, policies, and programs intended to manage and mitigate the impacts of future growth and development within San Ramon. This element is also intended to comply with the requirements of the Measure J Growth Management Program (GMP).

PROPOSED GROWTH MANAGEMENT ELEMENT GUIDING POLICIES, POLICIES, AND PROGRAMS

Goals and supportive policies and programs of the proposed General Plan Growth Management Element are shown in Table 2-13.

Table 2-13 San Ramon Growth Management Element Guiding Policies, Policies, and Programs

ID #	Goals and Supportive Policies/Programs
3.1-G-1	**Manage the City's growth in a way that balances existing and planned transportation facilities, protection of open space, creeks, and ridgelines, provision of diverse housing options, and the preservation of high quality community facilities and services.**
3.1-I-1	Allow urban development when traffic impacts from that development can be accommodated within acceptable traffic operations Measures of Effectiveness (MOE's).
3.1-I-2	Work with Contra Costa County, property owners, and appropriate agencies to preserve, protect, and enhance open space, creeks, and ridgelines within the City's Planning Area, and to establish contiguous open space areas along the edges of San Ramon.
3.1-I-3	Provide a variety of diverse housing options to accommodate the local employment base.
3.3-I-4	As part of the development review process, consider the City's ability to provide public services through the use of adopted performance guidelines.
3.3-I-5	Use growth management policies to encourage the construction of workforce housing necessary to meet local housing needs.
3.3-I-6	Join with and encourage other jurisdictions to participate in regional transportation planning programs.
3.3.1-7	Allow urban development only within the City's Urban Growth Boundary (see Implementing Policies 4.6-I-1 through 4.6-I-5) and only in accord with a plan for full urban services (police, fire, parks, water, sanitation, streets and storm drainage) to which all providers are committed.
3.2-G-1	**Ensure the attainment of public facility and service standards through the City's development review process, Capital Improvement Program (CIP), and a variety of funding mechanisms such as special assessment districts to maintain existing facilities, help fund expansions, including future retrofits and upgrades, to meet new regulatory requirements.**
3.2-I-1	Review and document compliance with the City's performance guidelines through the development review process.
3.2-I-2	Utilize the Capital Improvement Program to track and monitor the construction and implementation of the City's infrastructure improvements and ensure funding sources.
3.2-I-3	Require new development to fund public facilities and infrastructure as applicable to mitigate the impact of that new development.
3.2-I-4	Levy local, sub-regional, and regional mitigation fees for public facilities and infrastructure improvements in proportion to a new development's impact.
3.2-I-5	Use other funding mechanisms to augment developer and/or mitigation fees, when appropriate.
3.2-I-6	Utilize Measure J Transportation Improvement Funds may be used for any eligible transportation purpose, however, Measure J funds cannot replace private developer funding for transportation projects and infrastructure that are needed to mitigate the impacts their development creates.
3.2-I-7	Implement partnerships with private developers, to the extent practical and appropriate, to construct joint public/private facilities and utilities.
3.3-G-1	**Maintain acceptable traffic LOS on City streets and roadways through implementation of Transportation Demand Management (TDM), Growth Management, the Capital Improvement Program, and traffic engineering operational measures.**
3.3-I-1	Strive to maintain traffic LOS C or better as the standard at all intersections with LOS D during a.m. and p.m. peak periods.
3.3-I-2	On arterial roadways, accept LOS E during a.m. and p.m. peak periods with the possibility of signalized intersections at or closely approaching the limits of LOS E (average control delay <= 80 seconds/vehicle), where improvements to meet the City's standard would be prohibitively costly or disruptive.

ID #	Goals and Supportive Policies/Programs
3.3-I-3	Require traffic impact studies for all proposed new development projected to generate 50 or more net new peak hour vehicle trips or as requested by the City Traffic Engineer.
3.3-I-4	Proposed development expected to generate 50 or more peak hour vehicle trips cancan be approved, if it can be shown that its impact can be mitigated and the City's traffic and circulation standards can be maintained. The City also will approve proposed development expected to generate over 100 peak hour vehicle trips, if "Findings of Consistency" can be made.
3.3-I-5	Identify and implement circulation improvements on the basis of detailed traffic studies.
3.3-I-6	Support regional and local neighborhood transit options to reduce the use of the automobile, reduce VMT, and maintain acceptable traffic levels of service.
3.4-G-1	**Utilize Transportation Demand Management (TDM) strategies as an integral component of the City's transportation program to reduce total vehicle trips and VMT on San Ramon roadways and reduce the corresponding GHG emissions that promote regional air quality improvements.**
3.4-I-1	Continue to implement the City's TDM Program to reduce VMT.
3.4-I-2	Work with 511 Contra Costa, other jurisdictions and agencies to coordinate the City's TDM Program with regional TDM programs and activities.
3.4-I-3	Cooperate with regional and local service providers and other jurisdictions to promote local and regional public transit service.
3.4-I-4	Support local feeder transit service to and from current and future regional transit lines.
3.4-I-5	Preserve options for future transit use when designing improvements for roadways.
3.4-I-6	Support future transit uses, such as light rail or BART, in the I-680 right-of-way.
3.4-I-7	Improve and expand the bicycle route network in San Ramon.
3.5-G-1	**Participate in regional cooperative and multi-jurisdictional transportation planning for the maintenance of regional mobility and air quality standards as required by the Measure J Growth Management Program and the Contra Costa Congestion Management Plan (CMP).**
3.5-I-1	Continue to develop and implement Action Plans for Routes of Regional Significance, in cooperation with the Southwest Area Transportation Committee (SWAT), the Contra Costa Transportation Authority (CCTA), and the Tri-Valley Transportation Council (TVTC).
3.5-I-2	Continue to implement the Tri-Valley Transportation Action Plan through participation in the Tri-Valley Transportation Council (TVTC).
3.5-I-3	Participate in programs to mitigate regional traffic congestion, including implementation of regional and sub-regional traffic impact fees on new development.
3.5-I-4	Emphasize regional transportation demand management and trip reduction strategies as alternatives to increased roadway capacity.
3.5-I-5	Continue to address the impacts of land use decisions on regional and local transportation facilities by applying the Contra Costa Transportation Authority (CCTA) travel demand model and technical procedures during project analysis. Additionally, help maintain CCTA's travel demand modeling system by providing information on proposed improvements to the transportation system and future developments and long-range plans within San Ramon.
3.5-I-6	Participate in the Contra Costa Transportation Authority conflict resolution process as needed to resolve disputes related to the development and implementation of Action Plans and other Growth Management Program.
3.6-G-1	**Promote the opportunity to both work and live in San Ramon through implementation of the Housing Element.**
3.6-I-1	Develop and implement housing programs that emphasize the availability of housing for people who work in local jobs.
3.6-I-2	Evaluate the impact of proposed General Plan Amendments on the availability of job and housing opportunities.

ID #	Goals and Supportive Policies/Programs
3.6-I-3	Prepare a biennial report on the implementation of actions outlined in the Housing Element, for submittal to Contra Costa Transportation Authority as part of the biennial Growth Management Program Compliance Checklist.
3.6-I-4	As part of the development review process, support the accommodation of public transit, bicycle, and pedestrian access for new development.

Source: San Ramon, City of. 2023. San Ramon Draft 2040 General Plan Growth Management Element.

Economic Development Element

The Economic Development Element, another component of the current General Plan, will also be updated. The Economic Development Element includes guiding policies, policies, and programs related to retention and expansion of existing business sectors, as well as diversifying the economy to develop new kinds of businesses in San Ramon.

PROPOSED ECONOMIC DEVELOPMENT ELEMENT GUIDING POLICIES, POLICIES, AND PROGRAMS

Guiding Policies and supportive policies and programs of the proposed General Plan Economic Development Element are shown in Table 2-14.

Table 2-14 San Ramon Economic Development Element Guiding Policies, Policies, and Programs

ID #	Goals and Supportive Policies/Programs
2.3-G-1	**Foster a climate in which businesses can prosper**
2.3-I-1	Implement the goals and strategies of the Economic Development Strategic Plan (EDSP).
2.3-I-2	Work with regional Economic Development Organizations to foster the economic health of the City and surrounding region.
2.3-I-3	Maintain the Economic Development Advisory Committee to advise the City Council and staff regarding economic development, redevelopment, and employment issues.
2.3-I-4	Work with the business community to periodically evaluate City services and receive improvement suggestions.
2.3-I-5	Provide expedited permit review processing for development proposals meeting City goals.
2.3-I-6	Encourage housing on infill sites in the City's two PDAs (City Center and North Camino Ramon), where flat terrain and proximity to employment, shops and services favors walking, bicycling and travel by other modes than single-occupant vehicle.
2.3-I-7	Work with private sector entities to identify and implement technologically advanced infrastructure improvements to enable the City to remain competitive with other localities.
2.3-I-8	Promote San Ramon as a location for business. Coordinate a City effort to "sell" San Ramon as a business location offering assets that include an educated workforce; competitive development sites; and an active, business-friendly government with low business license fees.
2.3-I-9	Develop a comprehensive Business Development Strategy that includes access to tools and resources needed by new and existing businesses to grow in San Ramon as part of the EDSP update.

ID #	Goals and Supportive Policies/Programs
2.3-G-2	**Provide adequate land use designations to accommodate planned development, with business and commercial areas complementing residential and public development in location/access, mix of uses, attractiveness, and environmental quality.**
2.3-I-10	Continue to refine development standards, and potentially other development-assistance tools, that allow for better utilization of sites already developed for employment uses (e.g., through height and/or floor area ratio increases in combination with structured parking).
2.3-I-11	Prepare development standards specifically to address the proportion of non-commercial development allowed in the course of shopping center revitalization, and the conditions under which such proportions would be allowed.
2.3-I-12	Work toward redevelopment and revitalization in the Crow Canyon area through implementation of the San Ramon Village Specific Plan to address the City's future needs for residential and non-residential development.
2.3-I-13	Promote and encourage public transit, carpool and vanpool opportunities into San Ramon's business areas.
2.3-I-14	Encourage and facilitate non-motorized means of transportation to business areas.
2.3-I-15	Implement the approved CityWalk area into a cultural, recreational, residential, and vibrant mixed-use lifestyle center.
2.3-I-16	Use development standards to minimize adverse visual effects of transportation infrastructure.
2.3-I-17	Pursue alternative funding sources to secure and maintain open space and park facilities in San Ramon.
2.3-I-18	Encourage businesses to promote the use of commute alternatives among their employees by implementing the City's Transportation Demand Management (TDM) programs.
2.3-I-19	Establish a system for ongoing coordination of specific plan areas, to maximize the potential for mutually reinforcing development to occur, with attention to emerging opportunities, transportation linkages, expanding markets, and similar considerations.
2.3-G-3	**Ensure the fiscal and financial health of the City.**
2.3-I-20	Evaluate the ability of new development to pay for its infrastructure, its share of public and community facilities, and the incremental operating, maintenance, and upgrade costs it imposes.
2.3-I-21	Seek to maintain an operating reserve consistent with the City Council's reserve policy to assure that sufficient financial resources will be available in the event of sudden economic dislocations or general economic slowdowns.
2.3-I-22	Through proactive economic development marketing and business attraction efforts, encourage diverse and complementary economic growth along with the retention of existing businesses within the City, particularly in the retail sector.
2.3-I-23	Assure adequate revenue sources to finance City capital facilities and program initiatives.
2.3-I-24	Assure that ongoing budgets provide for adequate maintenance of the City's capital facilities, and establish fees commensurate with services rendered (e.g., application processing fees, planning, building and safety and engineering) to recover costs of these services.
2.3-G-4	**Work with the private sector and educational institutions to assure an adequate supply of skilled workers and capital improvements needed to attract and maintain business in San Ramon.**
2.3-I-25	Encourage local educational institutions to establish education and continuing education programs to meet the existing and foreseeable needs of local employers.
2.3-I-26	Support location of a four-year college within the Tri-Valley.
2.3-I-27	Continue to support the success and development of Diablo Valley College (DVC) in San Ramon.
2.3-I-28	Maintain the City's Capital Improvement Program.

ID #	Goals and Supportive Policies/Programs
2.3-G-5	**Strengthen the retail sector in San Ramon in order to expand retail and restaurant options for residents and employees and to increase the tax base.**
2.3-I-29	Strengthen the role of central Bollinger Canyon Road as the City's premier retail corridor.
2.3-I-30	Encourage neighborhood serving retail and restaurant in Mixed Use - Commercial areas to serve the daily needs of to local residents.
2.3-I-31	Encourage the formation of Business Improvement Districts or other funding mechanisms to facilitate construction/provision of amenities and other activities such as a coordinated wayfinding program, signage, branding, or event promotion.

Source: San Ramon, City of. 2023. San Ramon Draft 2040 General Plan Economics and Economy Element.

2.6 Zoning Ordinance Update

California Government Code Section §65860(a) requires that a jurisdiction's zoning ordinance be consistent with its General Plan or any updates to its General Plan. Therefore, the City is proposing to amend its existing zoning ordinance (i.e., Zoning Ordinance) to ensure compatibility with its adopted 2040 General Plan and to allow for development intensities and uses that are consistent with its adopted General Plan. The City's updated Zoning Ordinance would therefore implement the goals and policies of the 2040 General Plan by regulating the use of land and structures within the City. The City's proposed Zoning Ordinance updates would amend the City's existing Zoning Ordinance to implement the City's 2040 General Plan and to promote and enhance the public health, safety, and welfare of the residents of San Ramon. Since the Zoning Ordinance regulates, among other things, land use, density, lot coverages, lot sizes and setbacks, building sizes, landscaping, and parking, it is the means for the City to implement its General Plan, which is the policy document for its future growth. A jurisdiction's General Plan (in this case, the 2040 General Plan) is the official guide for the future physical development of the City and its land use planning and zoning changes.

San Ramon will implement many General Plan policies through the City's Zoning Ordinance and specific plans. As noted above, zoning must be consistent with the General Plan if the City's land use, housing, and open space policies are to be realized. A fundamental link between the General Plan and zoning is land use/zoning consistency. Table 2-15 below shows how zoning districts in San Ramon are consistent with the land use designations of General Plan 2040.

Table 2-15 Consistency Between the General Plan and the Zoning Ordinance

General Plan Land Use Designations	Consistent Base Zoning Districts
Residential	
Rural Conservation	RC
Hillside Residential	HR
Single Family-Low Density	RE-A, RE-B, RS-12, RS-10
Single Family-Low Medium Density	RS-10, RS-7, RS-6
Single Family-Medium Density	RS-6, RS-D
Multiple Family-High Density	RM, RMH
Multiple Family-Very High Density	RH, RVH

General Plan Land Use Designations	Consistent Base Zoning Districts
Office, Commercial, Industrial	
Office	OL, OA, M-1, M-2
Mixed Commercial	MC
Retail Shopping	CC
Thoroughfare Commercial	CT
Mixed Use	
Mixed-Use, Commercial Emphasis	MUX
Mixed-Use, Residential Emphasis	MUR
Downtown Mixed Use, North	DMU-N
City Center Mixed Use	CCMU
Community Facilities/Open Space	
Commercial Recreation	CR, P
Golf Course	GC
Public and Semipublic	PS, CR, M-1, M-2,
Parks	P,
Open Space	OS-1, OS-2, AG, RC

Note:
A specific plan can also implement any of the General Plan land use designations.

As part of the amendments to the Zoning Ordinance, the following new Zoning Districts would be added to implement the new General Plan 2040 Land Use Designations:

2.6.1.1 **MUX (Mixed-Use, Commercial Emphasis) Zone.** The purpose of the Mixed-Use, Commercial Emphasis (MUX) zone is to provide areas for an integrated neighborhood, primarily to enhance existing and promote new commercial uses (retail and/or office) with complementary residential uses. A density range of 20 to 40 dwelling units per acre allows a variety of residential housing types located along street frontages. The MUX zone envisions commercial uses (retail and/or office) as the primary use along street frontages, with residential uses located behind or above the primary commercial uses. Development could be stand-alone, vertical, or horizontal mixed-use configurations. Within the MUX zone, nonresidential FAR minimums are established to maintain retail square footage.

2.6.1.2 **MUR (Mixed-Use, Residential Emphasis) Zone.** The purpose of the Mixed-Use, Residential Emphasis (MUR) zone is to provide areas for an integrated neighborhood, with a combination of primarily residential uses mixed with complementary office and commercial uses. The MUR zone provides housing infill opportunities on existing small and mid-size office and service commercial parcels. A density range of 20 to 40 dwelling units per acre allows a variety of residential housing types located along street frontages. Development can be stand-alone, vertical, or horizontal mixed-use configurations. Within the MUR zone, residential FAR minimums are established to maintain and encourage residential development within this zone.

2.6.1.3 **DMU-N (Downtown Mixed-Use, North) Zone.** The purpose of the Downtown Mixed-Use, North (DMU-N) zone is to encourage an integrated neighborhood of commercial and residential uses within the Core area of San Ramon. The intent is to incorporate new residential uses in the existing office setting with pedestrian-friendly streetscapes, open spaces, and trails connecting to the Iron Horse Trail and City Center. Residential uses are located adjacent to the street and complementary offices, services, and goods in close proximity to transportation networks. The allowed density in the DMU-N zone ranges from a minimum of 20 dwelling units per acre to a maximum of 60 dwelling units per acre. Development is generally intended to be vertical in nature with residential entryways taking advantage of the City's Walking District, and allowance for higher density. Development can be vertical mixed use or stand-alone residential in proximity to nearby commercial uses with a horizontal mixed-use configuration.

The City of San Ramon is rezoning a select number of Housing Opportunity Sites identified as rezone sites (55 sites of the 70 Housing Opportunity Sites) in the Housing Element. The upzoning would result in the following ranges:

- One site: 6 to 14 dwelling units per acre
- Five sites: 20 to 30 dwelling units per acre
- Five sites: 22 to 30 dwelling units per acre
- Two sites: 22 to 35 dwelling units per acre
- Thirty-four sites: 20 to 40 dwelling units per acre
- One site: 30 to 50 dwelling units per acre
- Seven sites: 20 to 60 dwelling units per acre

Land use classification changes would reflect new density ranges permitted for each parcel and updates to the Zoning Ordinance development standards such as heights, setback, lot coverage, Floor Area Ratio, allowed uses, parking requirements, and landscape requirements. Proposed Zoning Ordinance text changes such as accessory dwelling unit standards, density bonus law requirements, by-right approval provisions, definitions, etc. will implement the City's Housing Element and State Housing law and maintain internal consistency with the General Plan. The associated land use map of the General Plan is being updated to reflect new land use classifications. The associated zoning map of the Zoning Ordinance will be updated to reflect the 1) rezoning of select Housing Opportunity Sites, 2) addition of new zoning districts to implement the General Plan, and 3) rezoning for consistency with the General Plan 2040 land use map. Proposed map changes, and the new Zoning District development standards and allowed uses are shown in Appendix A-2.

2.7 Construction

Given the programmatic nature of the 2040 General Plan, specific projects details and locations that could result in the future within these land use areas are unknown at this time. All future projects would require project-level environmental review analysis.

2.8 Required Actions and Approvals

Implementation of the proposed plan would require the following approvals:

- EIR Certification: City Council
- Adoption of 2040 General Plan, Amendment to the San Ramon Village Specific Plan, repeal of the North Camino Ramon Specific Plan, Zoning Ordinance Amendments, and Zoning Map changes: City Council

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3 Environmental Impact Analysis

This chapter sets forth the physical and regulatory environmental setting and addresses the environmental impacts of the General Plan Update (proposed plan) with respect to 13 environmental resource areas. The discussions of the environmental setting in each subsequent section of this Environmental Impact Report (EIR) describe the present physical conditions, or baseline conditions, in the General Plan area (plan area). The baseline used for the analysis of environmental impacts under the California Environmental Quality Act (CEQA) reflects the conditions present at the time the Notice of Preparation (NOP) for this EIR, published on June 24, 2022. The potential impacts of the proposed plan are compared against the existing baseline conditions for each environmental resource.

Environmental Topics Addressed in this EIR

The proposed plan is analyzed in this EIR from the perspective of the following 13 environmental topics:

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

Format of the Environmental Analysis

Each environmental resource area is analyzed in individual sections that include 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 plan area 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 associated with implementation of the proposed plan.

Regulatory Framework

This subsection describes the relevant federal, California, regional, 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 implementation of the proposed plan to result in direct and indirect adverse impacts on the existing physical environment, with consideration of both construction and operation impacts. The significance criteria questions for environmental impacts are listed at the beginning of this subsection, followed by the discussion of the approach to the analysis and specific thresholds of significance that have been applied to evaluate the impacts of the proposed plan.

Indirect impacts are discussed only for those resources for which they have the potential to occur (e.g., population and housing, cultural resources, air quality, and biological resources). Both plan-level and cumulative-level impacts are analyzed. Plan-level impacts could result from actions related to implementation of the proposed plan. Cumulative-level impacts could result from implementation of the proposed plan in combination with other identified cumulative projects. As discussed in "Cumulative Setting" below, the plans and projects listed in Table 3-1, in conjunction with the proposed plan, are considered the cumulative scenario for the analysis of cumulative impacts.

Impacts are analyzed and the respective assessment and findings are provided, applying the following levels of significance:

- **No Impact.** A determination of No Impact is reached if no potential exists for impacts or if the environmental resource does not occur in the plan 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.** This determination applies if the proposed plan 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.** This determination applies if the proposed plan 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 or improvement measures, or both, are incorporated into the proposed plan 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. Where no mitigation measures are necessary, relevant impacts are concluded to be Less than Significant 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 future project sponsors are required

to implement all identified mitigation measures identified in the Final EIR, and the lead agency (in this case, the City of San Ramon) is responsible for overseeing implementation of such mitigation measures.

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., "LU" for Land Use and Planning). The following abbreviations are used for individual topics:

- Aesthetics (AES)
- Air Quality (AQ)
- Biological, Agriculture, and Forestry Resources (BIO)
- Cultural and Tribal Cultural Resources (CR)
- Geology, Soils, and Mineral Resources (GEO)
- Greenhouse Gas Emissions and Energy (GHG)
- Hazards, Hazardous Materials, and Wildfire (HAZ)
- Hydrology and Water Quality (HYD)
- Land Use Planning, Population, and Housing (LU)
- Noise (NOI)
- Public Services and Recreation (PS)
- Transportation (TRA)
- Utilities and Service Systems (UTL)

Cumulative Impacts

This subsection evaluates the potential for the proposed plan in conjunction with other identified cumulative plans and projects (see Table 3-1) to result in cumulative impacts. The goal of this analysis is to determine whether the overall long-term impacts of all such plans and projects would be cumulatively significant, and to determine whether the proposed plan on its own would cause a "cumulatively considerable" incremental contribution to any such cumulatively significant impacts. To determine whether the overall long-term impacts of all such plan and projects would be cumulatively significant, the analysis generally considers the following:

- The area in which impacts of the proposed plan would be experienced;
- The impacts of the proposed plan that are expected in the area;
- Other past, proposed, and reasonably foreseeable plans and projects that have had or are expected to have impacts in the same area;
- The impacts or expected impacts of these other plans and projects; and
- The overall impact that can be expected if the individual impacts from each plan or project are allowed to accumulate.

"Cumulative impacts" refers to two or more individual impacts that, when considered together, are considerable, or that compound or increase other environmental impacts (CEQA Guidelines Section 15355). Cumulative impacts can result from individually minor but collectively significant impacts taking place over time. If the analysis determines that the potential exists for the proposed plan, taken together with other past, present, and reasonably foreseeable future plans and projects, to

result in a significant or adverse cumulative impact, the analysis then determines whether the proposed plan's incremental contribution to any significant cumulative impact is itself significant (i.e., "cumulatively considerable"). The cumulative impact analysis for each individual resource topic is presented in each resource section of this chapter immediately after the description of the direct impacts and identified mitigation measures.

Cumulative Scenario Setting

Table 3-1 lists the relevant plans and larger-scale projects considered in conjunction with the proposed plan for the cumulative impacts environmental analysis that is included at the end of each environmental resource topic section in this EIR.

Table 3-1 Cumulative Plans and Larger-scale Projects List

			Development Net Increase			
Name	Jurisdiction	Land Uses	Units	Non-residential Gross Square Footage	Location	Status
2481 Deerwood Dr	City of San Ramon	Residential	61	-	San Ramon	Approved
130 Market Pl (Marketplace Mixed Use Development)	City of San Ramon	Residential, Commercial	40 + 4 ADUs[1]	1,869	San Ramon	Approved
3401 Crow Canyon Rd (Iron Horse Village)	City of San Ramon	Residential	117	-	San Ramon	Proposed – under review
19251 San Ramon Valley Blvd; El Nido Assisted Living	City of San Ramon	Commercial	-	34,512 (72 Beds)	San Ramon	Approved
9000 Alcosta Blvd (Aspen Wood Senior Apartments)	City of San Ramon	Residential	123	-	San Ramon	Approved – under construction
Bishop Ranch 1A (Belmont Village Senior Residential Care Facility - Portion of CityWalk)	City of San Ramon	Commercial		180,000 (183 Beds)	San Ramon	Approved – under construction
47 Paddock Ln (Bierwith Lot Split)	City of San Ramon	Residential	1	-	San Ramon	Approved
Bishop Ranch (CityWalk) Master Plan	City of San Ramon	Residential, Commercial	4,119 [2]	170,000	San Ramon	Approved
City Center Hotel	City of San Ramon	Commercial	-	114,392	San Ramon	Approved
The Preserve Development	City of San Ramon	Residential	438	-	San Ramon	Building Permit Issued
2251 San Ramon Valley Blvd (ROEM Apartments)	City of San Ramon	Residential, Commercial	169	6,146	San Ramon	Approved

Name	Jurisdiction	Land Uses	Development Net Increase			
			Units	Non-residential Gross Square Footage	Location	Status
Chang Residential	City of San Ramon	Residential	43 + 18 ADUs[1]	-	San Ramon	Approved
Gale Ranch Phase IV (Deer Creek South)	City of San Ramon	Residential	185	-	San Ramon	Building Permit Issued
Promenade at The Preserve: Faria Neighborhood 5	City of San Ramon	Residential	162	-	San Ramon	Building Permit Issued
2400-2440 Camino Ramon (City Village)	City of San Ramon	Residential	404	-	San Ramon	Approved – under construction
500 Deerwood Rd (TTLC Townhomes)	City of San Ramon	Residential	57	-	San Ramon	Approved
2701 Hooper Dr (Windflower Fields)	City of San Ramon	Residential	47 + 16 ADUs[1]	-	San Ramon	Approved
6131 Bollinger Canyon Rd (Portion of CityWalk)	City of San Ramon	Residential	381	-	San Ramon	Approved – under construction
2023-2031 Housing Element Update	City of Danville	Residential	2,645	-	Danville	Undergoing environmental review
Envision Contra Costa 2040	Contra Costa County	Residential, commercial	7,610*	n/a	Unincorporated Contra Costa County	Undergoing environmental review
Plan Bay Area 2050	All Bay Area jurisdictions	Transportation, residential	-	-	All Bay Area jurisdictions	Approved – under implementation

Source: Information compiled by Rincon Consultants in 2023.

[1] ADUs = Accessory Dwelling Units

[2] Remaining CityWalk units from original approved 4,500 units

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3.1 Aesthetics

This section describes existing conditions related to visual character, scenic resources, views, and light and glare, as well as the relevant regulatory framework. This section also evaluates potential impacts to aesthetics that could result from implementation of the 2040 General Plan. Information in this section is based on information obtained from the San Ramon 2035 General Plan, San Ramon Municipal Code, the California State Scenic Highway System map, and photos taken of the General Plan area.

3.1.1 Environmental Setting

Visual Character

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.

San Ramon (General Plan Area)

The San Ramon Planning Area (i.e., the General Plan area) covers the 36.7 square miles (23,499 acres) including streets, highways, and other transportation corridors in southern Contra Costa County. The Town of Danville borders San Ramon to the north and contains primarily residential neighborhoods with some commercial development, open space, and recreational areas including the Crown Canyon Golf Course. The unincorporated Contra Costa County communities of Diablo and Blackhawk are located northeast of San Ramon and include primarily residential neighborhoods with some commercial uses, open space, and recreational areas. Unincorporated Contra Costa County, containing adjacent open space, borders San Ramon to the east. The City of Dublin borders San Ramon to the south, and directly adjacent uses include residential neighborhoods. Unincorporated Contra Costa County borders San Ramon to the west and includes directly adjacent open space land uses, such as East Bay Regional Park District (EBRPD) Bishop Ranch.

San Ramon features varied topography with a mix of the rolling hills of the Diablo Range and the flatter basin of the San Ramon Valley. The San Ramon General Plan area's natural setting is distinguished by its proximity to Mount Diablo to the northeast, the Diablo Range foothills to the north, the hills of Hidden Valley Open Space and Tassajara Valley to the east (Figure 3.1-11), the Las Trampas Regional Wilderness to the northwest, and Bishop Ranch Regional Preserve to the west. The Las Trampas Wilderness Regional Preserve (Figure 3.1-1, Photograph 1) expands into the northwestern portion of the General Plan area, and Bishop Ranch Regional Open Space Preserve (Figure 3.1-1, Photographs 3 and 4) is located within the western portion of the General Plan area just outside city limits. Hillside residential communities, such as those exemplified in Figure 3.1-1 (Photograph 2) are privy to expansive views of the surrounding hills and natural areas.

San Ramon is characterized as a suburban residential community, as approximately 60 percent of San Ramon's developed land is occupied with residential uses (30 percent of General Plan area

acreage). Residential development in San Ramon is generally suburban with a loop-style network of curving streets and cul-de-sacs, such as those shown looking north from the intersection of Blakesley Drive and Arrowfield Way near Bellingham Square (Figure 3.1-4). Higher density residential neighborhoods (6 percent of General Plan area acreage) are generally located close to commercial uses along arterial streets (Figure 3.1-6), such as the ongoing development of the Aspenwood Apartments, shown from the northeast corner of Alcosta Boulevard and Kimball Avenue (Figure 3.1-3)

Commercial, retail, mixed-uses, and Bishop Ranch, a major employment center (Figure 3.1-13 and Figure 3.1-14), are primarily located to the east of Interstate 680 (I-680) in the northern portion of San Ramon. Commercial and service commercial (three percent) and office (four percent) development is concentrated near I-680 from Bollinger Canyon Road to the northern City limits. Most of the General Plan area's acreage is devoted to public/institutional land use (39 percent), mostly in the form of open space but also includes schools, churches, and other government-owned property (Figure 3.1-7 through Figure 3.1-9). Golf courses (4.5 percent) comprise nearly as much land use as multifamily residential. Less than 2 percent of the General Plan area's acreage contains vacant underutilized parcels, such as those shown in Figure 3.1-5 and Figure 3.1-12. Most non-residential buildings are contemporary office and industrial styles of architecture, with concrete walls, tinted glass windows, and neutral colors.

Scenic Resources

Most communities identify scenic resources as important visual assets that contribute to community identity. These resources can include landforms, trees, water features, and the built environment insofar as they enhance and define the visual character of a landscape. Scenic resources include natural and open spaces, as well as the built environment, particularly if certain architecture is of historic or artistic value.

San Ramon (General Plan Area)

The most prominent visual resources within the San Ramon Planning Area (i.e., the General Plan area) are the hills to the northwest/west of City limits and the hills associated with the Hidden Valley Open Space and Tassajara Valley in the eastern portion of the General Plan area. Other natural visual amenities within the General Plan area include San Ramon Creek within the Crow Canyon subarea, San Catanio Creek along Norris Canyon Road, and the Dougherty Hills ridgeline. However, the General Plan area does not contain any City-designated scenic resources[1].

[1] San Ramon, City of. 2019. San Ramon General Plan 2035 – Open Space and Conservation Element. Amended October 2019.

Figure 3.1-1 San Ramon Visual Character Representative Photographs

Photograph 1. Photograph of open space area (Las Trampas Regional Wilderness) from Hillcrest at The Preserve, looking northwest

Photograph 2. Photograph of hillside multi-family residential units from the Preserve Residents Clubhouse, looking south-southeast

Photograph 3. Photograph of entrance to recreational trail network (Bishop Ranch Regional Open Space) from Morgan Drive, looking south

Photograph 4. Photograph of open space area **(**Bishop Ranch Regional Preserve) from Morgan Drive trailhead, looking southwest

Views

Views may be generally described as panoramic views of a large geographic area for which the field of view can be wide and extend into the distance. Associated vantage points provide an orientation from publicly accessible locations. Examples of distinctive views include urban skylines, valleys, mountain ranges, or large bodies of water. Viewshed is a term used to describe a range of resources and their context that relate to what people can see in the foreground, middle ground, and background distances.

San Ramon (General Plan Area)

Viewers recreating, driving, biking, or walking through the San Ramon Planning Area (i.e., General Plan area) might be afforded views of the hills to the west (Figure 3.1-1) as they visit parks and trails or travel through San Ramon. Their exposure would vary based on proximity and ability to see the viewshed. Most buildings within San Ramon are one to five stories, and views west from San Ramon toward the western hillsides of Big Canyon and Rocky Ridge are visible beyond existing residential development (see Figure 3.1-1, Photograph 2). These views are not remarkable in their vividness as development and other intervening features prevent expansive vistas, but the hillsides are a notable part of the regional landscape and views, however limited, providing a sense of place and the context of the General Plan area.

As summarized in Table 3.1-1, various publicly accessible locations in the General Plan area offer views toward and/or through the General Pan area. Selected viewpoint locations are shown on Figure 3.1-2. Figure 3.1-3 through Figure 3.1-14 demonstrate existing daytime views from the selected viewpoints.

Table 3.1-1 Summary of Viewpoint Locations for Existing General Plan Area Views

Viewpoint Number	View Location Description
1	Looking northeast toward Aspenwood Apartments from corner of Alcosta Boulevard and Kimball Avenue
2	Looking north toward suburban residential units from intersection of Blakesley Drive and Arrowfield Way
3	Looking northwest toward San Ramon Specific Plan area from corner of Deerwood Rd and San Ramon Valley Boulevard
4	Looking east toward San Ramon Specific Plan area from San Ramon Valley Boulevard
5	Looking northeast toward California High School from Broadmoor Drive
6	Looking southeast toward Canyon Creek Presbyterian Church from intersection of Gale Ridge Road and Bollinger Canyon Road
7	Looking southwest toward City Hall from Bollinger Canyon Road
8	Looking southwest toward major intersection at Bollinger Canyon Road and Sunset Drive from pedestrian path on Sunset Drive
9	Looking east toward Bellingham Square from Blakesley Drive
10	Looking north toward North Camino Ramon Specific Plan area from Norris Canyon Road
11	Looking north toward City Center Bishop Ranch from Bollinger Canyon Road
12	Looking southwest toward Shops at Bishop Ranch from intersection of Sunset Drive and Bollinger Canyon Road

Source: Information compiled by Rincon in 2023.

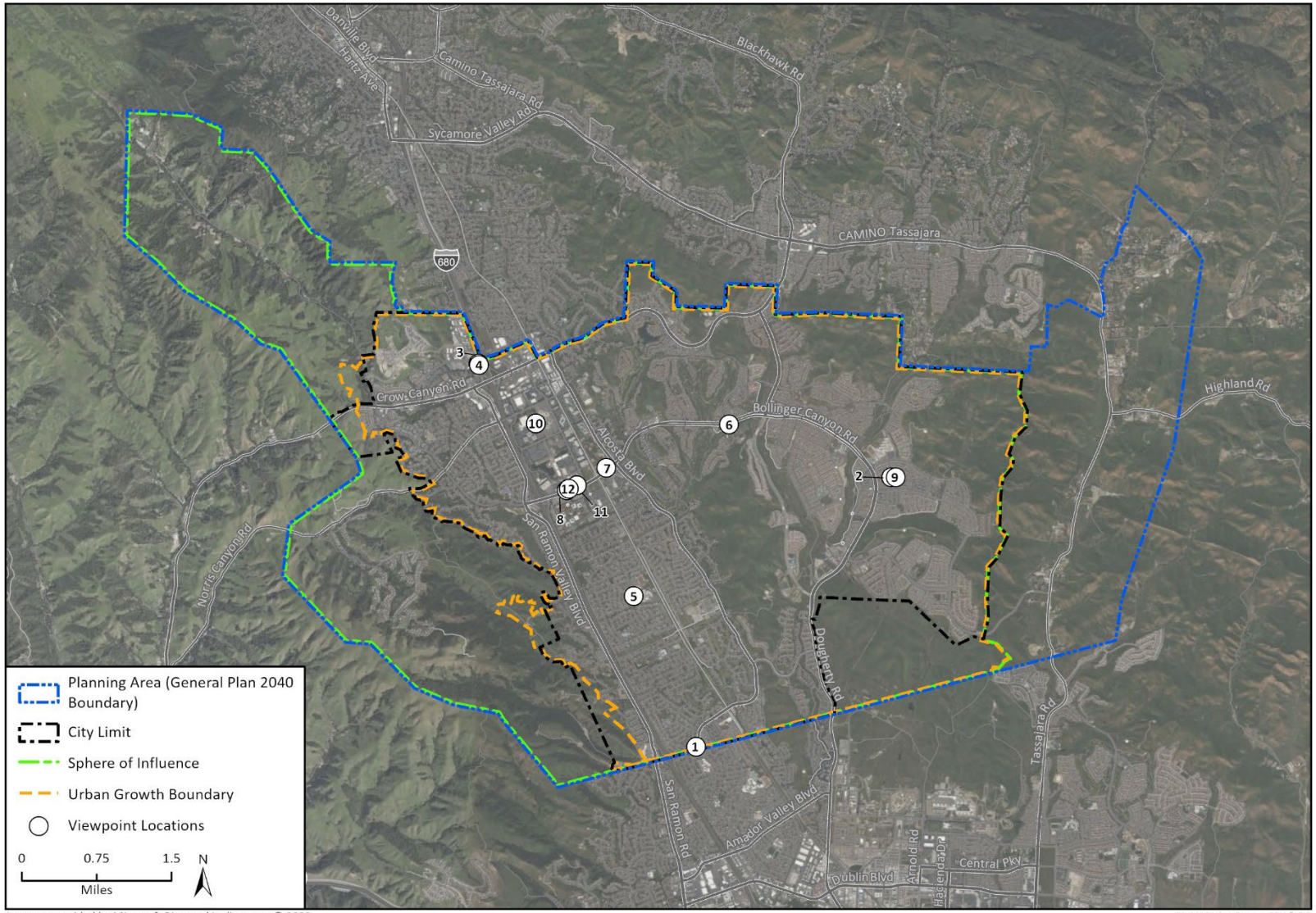
Most of the views in San Ramon reflect the visual unity of the built environment and indicate that San Ramon is generally built out to City limits.

Within San Ramon City limits, suburban residential communities feature detached single-family residences with gentle, curving streets lined with landscaping. High-density residential development is mostly located in proximity to arterial streets and commercial development.

The commercial corridors that also serve as vehicle thoroughfares, such as San Ramon Valley Boulevard and Bollinger Canyon Road, are dotted with various densities of commercial development, which are characterized by well-maintained landscaped buffers between the roadway and site parking lots. Views onto such commercial frontages are shown in Figure 3.1-6, Figure 3.1-9, Figure 3.1-10, Figure 3.1-13, and Figure 3.1-14. Figure 3.1-7, Figure 3.1-8, and Figure 3.1-9 show examples of San Ramon's public/institutional uses: California High School, Canyon Creek Presbyterian Church, and City Hall.

There are minimal long-range views within San Ramon, but the hills of the Las Trampas Regional Wilderness and Bishop Ranch Regional Open Space are intermittently visible from publicly accessible locations in the General Plan area's western sections, such as along San Ramon Valley Boulevard or Bollinger Canyon Road. A range of hillside views to the east of the General Plan area, such as those of Doolan Canyon Regional Preserve, are visible on the east side of the city. Public views of regional landmarks such as Mt. Diablo and the Mt. Diablo foothills are largely blocked by intervening vegetation and development within the central portions of San Ramon but can be viewed from trails and adjacent hilltops.

Figure 3.1-2 Viewpoint Locations for Existing General Plan Area Views



Imagery provided by Microsoft Bing and its licensors © 2023.
Critical Habitat data provided by USFWS, 2022.

21-11121 San Ramon GPU & EIR
FigX Viewpoint Locations

Figure 3.1-3 View 1: Looking northeast toward Aspenwood Apartments from corner of Alcosta Boulevard and Kimball Avenue

Figure 3.1-4 View 2: Looking north toward suburban residential units from intersection of Blakesley Drive and Arrowfield Way

Figure 3.1-5 View 3: Looking northwest toward San Ramon Specific Plan area from corner of Deerwood Rd and San Ramon Valley Boulevard

Figure 3.1-6 View 4: Looking east toward San Ramon Specific Plan Area from San Ramon Valley Boulevard

Figure 3.1-7 View 5: Looking northeast toward California High School from Broadmoor Drive

Figure 3.1-8 View 6: Looking southeast toward Canyon Creek Presbyterian Church from intersection of Gale Ridge Road and Bollinger Canyon Road

Figure 3.1-9 View 7: Looking southwest toward City Hall from Bollinger Canyon Road

Figure 3.1-10 View 8: Looking southwest toward major intersection at Bollinger Canyon Road and Sunset Drive from pedestrian path on Sunset Drive

Figure 3.1-11 View 9: Looking east toward Bellingham Square from Blakesley Drive

Figure 3.1-12 View 10: Looking north toward North Camino Ramon Specific Plan Area from Norris Canyon Road

Figure 3.1-13 View 11: Looking north toward City Center Bishop Ranch from Bollinger Canyon Road

Figure 3.1-14 View 12: Looking southwest toward Shops at Bishop Ranch from intersection of Sunset Drive and Bollinger Canyon Road

Scenic Highways

Scenic highways provide an opportunity for the public to take advantage of the natural environment's aesthetic value and typically pertain to visual resources outside the roadway right-of-way. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been officially designated. 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.

A highway is designated as an "eligible" scenic highway when the California Department of Transportation (Caltrans) determines that it qualifies for official status. The status of an "officially designated" scenic highway changes when the local governing body (City or County) applies to Caltrans for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated.[2]

San Ramon (General Plan Area)

I-680, which generally bisects San Ramon north to south, is an officially designated State scenic highway.[3] The nearest eligible State scenic highway, Arthur H. Breed Freeway (I-580), is located approximately 1.8 miles south of the General Plan area spanning east to west.

Light and Glare

In the context of *CEQA Guidelines*, light refers to nighttime illumination that stimulates sight and makes things visible, and is generated by a source of light; glare is difficulty seeing in the presence of bright daytime light such as direct or reflected sunlight.

San Ramon (General Plan Area)

Current light and glare levels within the General Plan area are consistent with suburban and urbanized development and include streetlights, exterior building lighting, and lighted signs. Primary sources of light in San Ramon are streetlights, parking lot lights, exterior building lighting, and lighted signs. Mobile and temporary sources of light include the headlights of vehicles driving on roadways within San Ramon. Streetlights and other security lighting also serve as sources of light in the evening hours. Primary sources of glare in San Ramon include sunlight reflected off buildings, including glass and window façades, and the windshields of parked cars.

[2] California Department of Transportation (Caltrans). 2023. California State Scenic Highways. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways (accessed April 2023).
[3] Caltrans. 2018. California State Scenic Highway System Map. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa (accessed April 2023).

3.1.2 Regulatory Framework

Federal Regulations

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

State Regulations

California Scenic Highway Program

California's Scenic Highway Program designates scenic highways with the intention of protecting these corridors from change that would diminish the aesthetic value of adjacent lands. The State Legislature created the California Scenic Highway Program, maintained by 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. 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 officially from eligible to officially designated when 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 Scenic Highway. Scenic highways must have an approved Corridor Protection Program and remain in compliance to maintain scenic highway status.

California Code of Regulations Title 24 - Building Lighting Characteristics

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 regulate lighting characteristics (i.e., maximum power/brightness, shielding, light sensor controls). Different lighting standards are set by classifying areas by lighting zone. The classification is based on 2020 Census population figures. 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. Most of San Ramon falls under the "urban" standard.

Local Regulations

San Ramon General Plan

The current San Ramon General Plan contains policies related to aesthetics and visual resources, which would be replaced by the proposed 2040 General Plan.

San Ramon Village Specific Plan

The San Ramon Village Specific Plan (SRVSP) provides a vision for an area of San Ramon that is currently underutilized but has the potential to develop into a vibrant mixed-use district for the community. The purpose of the SRVSP is to guide the evolution of this 134-acre office and service commercial area in a way that will encourage coordinated development, which responds to Citywide and regional objectives as well as to local and neighborhood considerations. A key objective is to create a new mixed-use residential and retail village node, while strengthening the role of San Ramon Valley Boulevard as a commercial corridor and preserving viable existing service

commercial uses wishing to remain.[4] The SRVSP includes the following goals and objectives related to visual resources and community character:

Objective 4: Ensure that the design of new development and connectivity improvements promote a human scale and establish a town character within the area.

Objective LU-2: Build a distinctive sense of place for the San Ramon Village area, drawing on the scenic natural features and the history of the area.

Policy LU-2.3 Preserve scenic natural views of the surrounding hills from the following key vantage points in the Plan Area:

- Looking west from Fostoria Way entering the San Ramon Village area;
- Looking east from Deerwood Road entering the San Ramon Village area.

Policy LU-2.4 Implement the objective development standards that enhance the appearance of and contribute positively to the visual character of the San Ramon Village area.

Policy LU-2.7 Provide project applicants the option of Development Plan Conceptual Review before the Planning Commission as an initial, non-binding and informal screening of a project concept. This option shall be exercised prior to formal submittal of a development application and determination of application completeness.

Objective LU-5: Preserve and enhance San Ramon Creek and its tributary as an environmental resource while also enhancing the riparian corridor as a recreational open space amenity for the community.

Policy LU-5.5 Minimize the removal of protected trees as defined by the City of San Ramon's tree preservation regulations. Revegetate areas disturbed by new development. Revegetation shall include a palette of species native to the watershed area. Following removal, woody trees should be replanted at a minimum 1:1 ratio, or as determined in consultation with applicable permitting agencies.

San Ramon Municipal Code

TITLE C – CONSTRUCTION, DEVELOPMENT, AND LAND USE

San Ramon Municipal Code Title C specifies development and design standards, including lighting, density, height, parking, and setback requirements for residential, commercial, retail, office, light industrial, public and semipublic uses, as well as tree preservation regulations and open space protections.

TITLE D – ZONING

San Ramon Municipal Code Title D seeks to preserve and enhance the visual character and natural features of the community by addressing details of site planning, project design, and the operation

[4] San Ramon, City of. 2020. San Ramon Village Specific Plan. Adopted November 24, 2020. https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_10826046/File/Our%20City/Departments/Community%20Development/Planning/Specific%20Plans/San%20Ramon%20Village%20Specific%20Plan/SRVSP,%20Adopted%2011.24.20.pdf (accessed March 2023).

of land uses through lighting requirements and limitations, general design standards and guidelines, natural resource management, and glare reduction, among other development standards.

3.1.3 Impacts and Mitigation Measures

Significance Criteria

The City of San Ramon utilizes the following 2022 *CEQA Guidelines* Appendix G significance criteria questions related to Aesthetics.

Would the 2040 General Plan:

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 existing visual character or quality of public views of the site and its surroundings? 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 that would adversely affect day or nighttime views in the area?

Approach to Analysis

Aesthetic impact assessments involve qualitative analysis that is subjective but informed by the basic guidelines provided above. Reactions to the same aesthetic conditions vary according to viewer taste and interests. Since the proposed plan is not a concrete development proposal, the analysis focuses on a general discussion of the aesthetic impacts within the General Plan area, in terms of the arrangement of built space to open space, potential loss of scenic resources, degradation of visual character, density and intensity of development, and visual fit with landscape characteristics.

Scenic Vistas and Resources

For the purposes of analysis, a scenic vista is a view from a public place (roadway, designated scenic viewing spot, etc.) that is expansive and considered by the City of San Ramon to be important. It can be obtained from an elevated position (such as from a trail near the top of a hillside) or it can be seen from a roadway with a longer-range view of the landscape. An adverse effect would occur if a proposed development would block or otherwise damage the scenic vista upon implementation.

Visual Character and Views

The impacts on visual character or quality attributable to 2040 General Plan implementation were evaluated relative to visual conditions under buildout, as estimated by existing experiences from public viewpoints in and around San Ramon. Photographs of San Ramon (Figure 3.1-1 and Figure 3.1-3 through Figure 3.1-14) were taken and reviewed in preparation of this analysis. Given that the proposed plan would facilitate development in urbanized areas,[5] the impact discussion of

[5] San Ramon is in an urbanized area pursuant to *CEQA Guidelines* Section 21071, which states that an incorporated city is urbanized if it has either (1) a population of at least 100,000 persons or (2) has a population of less than 100,000 persons if the population of that city and not more than two contiguous incorporated cities combined equals at least 100,000 persons. San Ramon has a population of less than 100,000 persons, but when combined with a contiguous city (the City of Dublin), the population exceeds 100,000. Therefore, San Ramon is considered urbanized.

visual character and views is focused on consistency with applicable zoning and other regulations governing scenic quality.

Light and Glare

The analysis of light and glare impacts focuses on the nature and magnitude of changes in light and glare conditions associated with implementation of the proposed plan on the General Plan area and surroundings. If the light and glare conditions of the proposed plan and the existing environment are similar, then the visual compatibility would be high. If the light and glare conditions of the proposed plan strongly contrast with the existing light and glare or applicable policies and guidelines, then light and glare compatibility would be low and significant impacts may result. Proposed design standards and guidelines as well as proposed plan guiding policies and implementing policies are applied to determine the significance of light and glare impacts associated with the proposed plan.

EIR Scoping Comments Consideration

No comments relevant to CEQA were received in response to the EIR NOP specific to aesthetics that need to be addressed in the impacts discussion.

Specific Thresholds of Significance

For the purposes of this analysis, the following thresholds are used to evaluate the significance of aesthetics impacts resulting from implementation of the proposed plan.

- Block existing views from a scenic route or corridor toward a visual/scenic resource (i.e., ridgeline)
- Be inconsistent with the character of the plan area or existing development in the surrounding area or would substantially alter existing natural topography
- Increase existing nighttime light or daytime glare sources in the plan area or vicinity in a manner that would substantially affect nighttime or daytime views

Impact Evaluation

Scenic Vistas

Significance Criterion a: Would the proposed plan have a substantial adverse effect on a scenic vista?

Impact AES-1 THE 2040 GENERAL PLAN WOULD FACILITATE DEVELOPMENT IN AREAS ALONG URBANIZED CORRIDORS THAT DO NOT OFFER NOTABLE SCENIC VISTAS THROUGH THE PLAN AREA. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Impacts related to substantial adverse effects on a scenic vista are limited to operational impacts, because construction impacts would not result in obstructions to scenic vistas. No substantial adverse effects on scenic vistas from construction would result from implementation of the proposed plan.

Operation

Development facilitated by the 2040 General Plan would occur within the urbanized areas of the General Plan area. These areas are highly developed with retail, restaurant, commercial, and residential land uses ranging up to five stories tall. Publicly available views throughout the General Plan area are largely limited by intervening development and topography, mature landscaping, and large street or median trees.

Development facilitated by the 2040 General Plan would largely consist of infill and redevelopment of existing urban areas. From streets and public places within the urbanized center of San Ramon, views of the natural environment from San Ramon are largely obscured by development and intervening topography, although views down the streets of the built environment and street trees are intact and create a sense of place. Scenic views of open space areas are most visible from proximate neighborhoods and along on the eastern and western perimeters of the General Plan area. Open space amenities such as the Bishop Ranch Open Space, Little Hills Recreation Area, Sycamore Valley Regional Open Space, and Las Trampas Regional Wilderness are accessible and visible from public streets within the General Plan area.

None of these views are designated as "vistas" or "scenic corridors" within the adopted-in-2035 San Ramon General Plan or the proposed 2040 General Plan. However, the 2040 General Plan Land Use Element and Open Space and Conservation Element contain guiding policies and implementing policies, listed below, that would ensure that scenic views of the surrounding hills and natural features are not adversely affected by development facilitated by the 2040 General Plan.

LAND USE ELEMENT

Guiding Policy 4.6-G-1: Foster a pattern of development that enhances the existing character of the City, and encourages land use concepts that contribute to the design of the community.

Policy 4.6-I-14 Require Clustered Development for four or more units that will maximize preservation of visible open space and encourage preservation of open space by allowing density to increase based on the percentage of the gross area permanently preserved as open space.

Guiding Policy 4.8-G-1: Maintain and enhance San Ramon's identity.

Policy 4.8-I-6 Seek to assure maximum public access to the Iron Horse Trail through land acquisition, licensing agreements with Contra Costa County, incentives for dedication, overhead trail crossings and improvement of land for trailhead parks and walkways.

Policy 4.8-I-18 As part of development proposals, encourage public access to creeks as scenic visual and passive recreational amenities in a manner consistent with need of applicable resource agencies to provide creek and habitat protection.

Policy 4.8-I-19 Continue to provide park and recreational amenities that combine well-designed buildings, recreational equipment and playing fields, and complementary landscaping at key locations throughout the City.

OPEN SPACE AND CONSERVATION ELEMENT

Guiding Policy 8.3-G-1: Acquire, preserve, and maintain open space and its natural resources for future generations.

Guiding Policy 8.3-G-2: Strengthen the City's partnership with East Bay Regional Parks District, Contra Costa County, other jurisdictions and private organizations to expand the ridgeline and hillside open space system in the city.

Policy 8.3-I-3 Explore opportunities to preserve significant creek, riparian areas, sensitive natural communities, and prominent topographic features as open space.

Policy 8.3-I-13 Implement existing viewshed criteria to manage views of the natural hillsides surrounding San Ramon.

Policy 8.3-I-16 Preserve ridgelines as open space, except for ridgelines that may be altered, as shown in Figure 8-3.

Policy 8.3-I-17 Preserve hillsides steeper than 20 percent slope as open space, except for slopes and ridgelines that may be altered, as shown in Figure 8-3.

Scenic views would continue to be available where they currently exist. Therefore, impacts of development facilitated by the 2040 General Plan related to scenic vistas would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Scenic Resources within State Scenic Highways

Significance Criterion b:	Would the proposed plan substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

Impact AES-2 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN COULD AFFECT SCENIC RESOURCES VISIBLE FROM A DESIGNATED SCENIC HIGHWAY. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Impacts related to substantial damage to scenic resources are limited to operational impacts. No respective construction impacts would occur under development facilitated by the proposed plan.

Operation

The entire stretch of I-680 within the General Plan area is officially designated as a State Scenic Highway by Caltrans [6]. I-680 generally bisects San Ramon north-to-south for approximately five miles through the General Plan area, with urbanized development located immediately on both

[6] Caltrans. 2018. California State Scenic Highway System Map. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa (accessed April 2023).

sides. Existing topography rises to the west and drops to the east of I-680. Views westward from f I-680 contain intermittent views of adjacent neighborhoods, landscaping, open space, and distant hilltops. These views are not designated as scenic resources by San Ramon[7]. Vegetation screening is used to obscure the westward view of residential and commercial development along the majority of I-680, but glimpses of scenic westward views from I-680 are occasionally visible through the intervening topography and landscaping. As such, no major scenic resources are visible westward from I-680.

Views eastward from I-680 are entirely obscured by tall solid walls for approximately three miles of the southernmost stretch of I-680; trees and other landscaping provide softer, but effective, screening for eastward views along the northernmost stretch of I-680. These views are not designated as scenic resources by San Ramon[8], and no major scenic resources are visible eastward from I-680.

Development facilitated by the 2040 General Plan occurring east of I-680 would not be visible from I-680 due to the walls and vegetation blocking the view. Development facilitated by the 2040 General Plan occurring west of I-680 would be intermittently visible from II-680 and could impact scenic resources. The San Ramon Municipal Code includes Tree Preservation Regulations, a Community Forestry Program, and other regulations for development within open space areas. The Tree Preservation Guidelines provide regulations for the protection, preservation, maintenance, and replacement of protected trees, including those of historic or cultural significance. The Community Forestry Program provides implementation recommendations for the annual community forestry work plan as well as public tree care policies for planting, maintenance, and removals to meet the standards necessary for Tree City USA designation by the National Arbor Day Foundation. These regulations would ensure that trees within a State scenic highway are not damaged by development facilitated by the 2040 General Plan. Additionally, the 2040 General Plan Open Space and Conservation Element contains guiding policies and implementing policies, listed below, that would ensure that historic buildings within a State scenic highway are not damaged by development facilitated by the 2040 General Plan.

OPEN SPACE AND CONSERVATION ELEMENT

Guiding Policy 8.7-G-1: Identify, evaluate, and preserve the archaeological, paleontological, and historic resources that are found within the San Ramon Planning Area.

Policy 8.7-I-2 Prepare Historical Resources Evaluation for projects involving structures 45 Years or older and implement identified mitigation prior to and during construction.

Policy 8.7-I-3 Conduct Archaeological Resources Assessment prior to project approval and implement identified mitigation prior to and during construction and include a policy to stop work in the event of unanticipated cultural resources discoveries during construction.

Policy 8.7-I-4 Protect and maintain the integrity of officially listed historic resources.

Policy 8.7-I-5 Review any proposals to nominate local resources for eligibility for listing on national or state historic registers.

[7] San Ramon, City of. 2019. San Ramon General Plan 2035 – Open Space and Conservation Element. Amended October 2019.
[8] Ibid.

The 2040 General Plan would direct future development in such a way as to minimize the impacts of growth by emphasizing the intensification and reuse of already developed areas, thus minimizing pressure to develop on the remaining open space that could contain scenic resources in San Ramon and instead directing growth and development to infill areas. Therefore, impacts related to damage of scenic resources within a State scenic highway would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Visual Character or Quality of Public Views

Significance Criterion c:	Would the proposed plan, 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 a publicly accessible vantage point). If the proposed plan is in an urbanized area, would the plan conflict with applicable zoning and other regulations governing scenic quality?

Impact AES-3 THE 2040 GENERAL PLAN WOULD FACILITATE INFILL AND REDEVELOPMENT PROJECTS WITHIN EXISTING URBAN AREAS AND ALLOW FOR INCREASED INTENSITY OF DEVELOPMENT ON UNDERUTILIZED SITES THAT COULD AFFECT VISUAL CHARACTER OR QUALITY OF VIEWS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Impacts related to substantial degrading of visual character or quality of public views are limited to operational impacts. In addition, no respective construction impacts resulting in conflicts with zoning and regulations governing scenic quality would occur under development facilitated by the proposed plan.

Operation

San Ramon is characterized as a suburban residential community, as approximately 60 percent of the General Plan area's developed land is occupied with residential uses. Higher density residential neighborhoods are generally located close to commercial uses along arterial streets. As a result, San Ramon is largely comprised of auto-oriented single-use areas. Commercial/service commercial and office development is concentrated along I-680 from Bollinger Canyon Road to the northern City limits. Less than two percent of the General Plan area's acreage contains vacant underutilized parcels. As such, the 2040 General Plan would facilitate infill development and redevelopment projects within existing urban areas, such as those exemplified in Figure 3.1-5 and Figure 3.1-12. This approach to development would minimize the impacts of growth in San Ramon by emphasizing the intensification and reuse of already developed areas, thus minimizing pressure to develop on the remaining open space, such as that exemplified in Figure 3.1-1, and directing growth and development to infill areas.

The 2040 General Plan includes residential and commercial design policies that address building massing, transitions, scale, orientation, and exterior building materials. The 2040 General Plan would allow for an increase in height and density but would also require that all future projects conform to policies that ensure high-quality architectural and site design that would create a sense of place and increase visual quality and unity throughout the entire General Plan area. Specifically, the 2040 General Plan Land Use Element, Public Facilities and Utilities Element, and Housing Element contain guiding policies and implementing policies, listed below, that would ensure that existing visual character and quality is not adversely affected by development facilitated by the 2040 General Plan.

LAND USE ELEMENT

Guiding Policy 4.6-G-1: Foster a pattern of development that enhances the existing character of the City, and encourages land use concepts that contribute to the design of the community.

Policy 4.6-I-9 Require residential development to employ creative site design and architectural quality that blends with the characteristics of each specific location and its surroundings, while incorporating 360-degree design principles.

Policy 4.6-I-19 Ensure that neighborhood retail centers and commercial service buildings are compatible with the surrounding neighborhood while incorporating 360-degree design principles.

Policy 4.6-I-24 Continue to refine objective design standards for mixed use development that will result in pedestrian-scaled environments, with one-to-four story buildings, integrated parking, streetfront windows, and entries, and public and private open space or as provided under a separate Specific Plan process.

Guiding Policy 4.8-G-1: Maintain and enhance San Ramon's identity.

Policy 4.8-I-1 Continue to develop and refine community design documents such as the San Ramon Beautification Plan, Creek Corridor Plan, Street Beautification Plan, Street Beautification Guidelines, Architectural Review guidelines and Engineering Design, Grading, and Procedures Manual to provide comprehensive design guidelines for beautification of streetscapes, creek corridors, City signs, public art, and community entries in San Ramon.

Policy 4.8-I-2 Ensure that the design, location, and size of new development blends with the environment and a site's natural features.

Policy 4.8-I-3 Continue to refine citywide lighting standards to ensure appropriate illumination levels for residential, commercial, and industrial land uses, and that lighting is of a consistent character and quality while reducing light pollution.

Policy 4.8-I-4 Ensure that parking facilities adequately address the community image, aesthetics and functional needs of the City.

Policy 4.8-I-5 Encourage the linkage and integration of new development with existing neighborhoods by means of Complete Streets networks, open space areas, parks, pathways, associated rights-of-way, and/or easements as a means of enhancing pedestrian and bicycle connections.

Policy 4.8-I-8 Use the development review process to ensure that new development minimizes impacts and preserves and/or enhances significant views of the natural landscape.

Policy 4.8-I-9 Continue to implement landscaping guidelines for public roadways that improve their visual character.

Policy 4.8-I-10 Continue to implement gateway treatments for City entries that help residents and visitors know they have arrived in San Ramon.

Policy 4.8-I-11 Require new office and commercial development to provide outdoor art that is clearly visible to the public or contribute to a citywide public art program though the development of an in lieu fee program.

Policy 4.8-I-12 Encourage attractive, drought-tolerant landscaping on private property that is suitable for San Ramon's climate.

Policy 4.8-I-14 Ensure that businesses provide signs that are attractive and consistent with neighboring commercial uses, minimize visual clutter from roadways and other public areas, and, where possible, cannot be seen from residential neighborhoods.

Policy 4.8-I-15 Maintain attractive and distinctive street identification signs for all areas of the City.

Policy 4.8-I-16 Continue to refine urban design standards in the Zoning Ordinance as needed for large-scale office development to promote smart growth principles while minimizing negative impacts on adjacent properties.

Policy 4.8-I-17 Implement the City Zoning Ordinance sun access plane requirements and provide provisions for encroachments into the sun access plane to allow architectural flexibility.

Policy 4.8-I-18 As part of development proposals, encourage public access to creeks as scenic visual and passive recreational amenities in a manner consistent with need of applicable resource agencies to provide creek and habitat protection.

Policy 4.8-I-20 Require all walls and fences to be designed to minimize visual monotony.

PUBLIC FACILITIES AND UTILITIES ELEMENT

Guiding Policy 7.1-G-1: Provide public and cultural facilities that contribute to the City's positive image and enhance community identity.

HOUSING ELEMENT

Guiding Policy GP 11.5.2-1: Create safe and aesthetically-pleasing neighborhoods, and provide adequate housing to meet the needs of all household types and income groups.

Policy IP 11.5.2-2 Enforce City ordinances that maintain the appearance and safety, and prevent deterioration, of residential neighborhoods.

Policy IP 11.5.2-7 Ensure that objective standards such as design, mass, and scale for housing is compatible with the character of the surrounding neighborhood.

Buildout associated with the 2040 General Plan would occur in compliance with the 2040 General Plan and would not conflict with the aforementioned goals and policies. Specifically, Guiding Policy 4.6-G-1 coupled with Implementing Policies 4.6-I-9, 4.6-I-19, and 4.6-I-24 would ensure that the pattern of future development is compatible with existing surroundings. Guiding Policy 4.8-G-1 and its accompanying policies ensure the maintenance and enhancement of San Ramon's identity through implementation of community design standards, preservation of natural features, lighting and landscape standards, development review processes, public art, and human-scale design features. These policies encourage a coherent cityscape through well-defined street fronts, gateway features, and scaled new development (i.e., appropriate transition between adjoining neighborhoods and land uses), as well as requiring the installation of public art that would enhance the visual character and quality of San Ramon. Additionally, designing to the human-scale (as opposed to the vehicle scale) would improve the urban design of the General Plan area and make spaces more accessible while encouraging social inclusion.[9]

Guiding Policy 7.1-G-1 would broadly maintain a quality community atmosphere and image through the provision of public and cultural facilities. Guiding Policy GP 11.5.2-1 and Implementing Policies IP 11.5.2-2 and IP 11.5.2-7 would enforce city ordinances and design standards to promote aesthetically pleasing neighborhoods that are compatible with community character.

In addition, Title D of the San Ramon Municipal Code and Zoning Code provides Site Planning and Project Design Standards intended to ensure that proposed development is compatible with existing and future developments and produces an environment of stable and desirable character, consistent with the San Ramon General Plan and applicable specific plans, such as the San Ramon Village Specific Plan.

2040 General Plan guiding policies and implementing polices would encourage urban design that complements and is consistent with the character of existing neighborhoods and encourages quality design throughout the General Plan area. Implementation of these guiding policies and implementing policies partnered with conformance to San Ramon Municipal Code and Zoning Code requirements would ensure that development facilitated by the 2040 General Plan would be visually compatible with San Ramon's overall form and would improve underutilized parcels through architectural and landscape design. As such, the 2040 General Plan would not conflict with San Ramon regulations governing visual character or quality. Therefore, 2040 General Plan operational impacts related to visual quality and character would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

[9] Alvarez-Diaz & Villalon Architecture and Interior Design. ND. Benefits of Human-Scale Design & Building. https://www.alvarezdiazvillalon.com/blog/6-benefits-of-human-scale-design-and-building#:~:text=Overall%2C%20human%2Dscale%20design%20and,and%20more%20dynamic%20urban%20areas (accessed April 2023).

New Source of Light or Glare

Significance Criterion d:	Would the proposed plan create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Impact AES-4 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD CREATE NEW SOURCES OF LIGHT OR GLARE THAT COULD ADVERSELY AFFECT DAYTIME OR NIGHTTIME VIEWS IN THE AREA. COMPLIANCE WITH THE SAN RAMON MUNICIPAL CODE AND 2040 GENERAL PLAN DEVELOPMENT STANDARDS RELATED TO LIGHTING AND GLARE WOULD ENSURE THIS IMPACT IS LESS THAN SIGNIFICANT.

Construction

Impacts related to creation of new sources of light and glare that could adversely affect daytime and nighttime views in the area are typically limited to operational impacts. In addition, most construction facilitated by the proposed plan would occur during the daytime, limiting potential for construction-related, temporary nighttime lighting impacts. Construction-related nighttime lighting would be used at future project construction sites only for safety and security purposes and would be shielded, directed downward, and limited from potential spillover to adjacent areas. As such, construction light and glare impacts related to implementation of the proposed plan would be less than significant.

Operation

San Ramon is an urbanized city with a commensurate degree of light and glare. The primary source of mobile nighttime light is motor vehicle headlights, particularly from I-680 and other high-traffic roadways. New development associated with implementation of the 2040 General Plan would, in large part, occur as infill development or redevelopment of urban areas. New lighting could occur on buildings for safety and in pedestrian walkways, and light could also be emitted from interior sources. Additionally, as discussed in Section 3.6 *(Greenhouse Gas Emissions & Energy)* and Section 3.9 *(Land Use Planning, Population, & Housing)*, development facilitated by the proposed plan could result in population growth and an associated increase in the number of vehicles (and thereby headlights) on the road. The main source of glare would likely be from the sun shining on the windows of parked cars associated with uses at the new development or reflective building surfaces or windows.

Development facilitated by the 2040 General Plan would increase lighting and glare in San Ramon. As the 2040 General Plan would facilitate infill development within the General Plan area along major transit corridors like San Ramon Valley Boulevard (Figure 3.1-5) and Bollinger Canyon Road (Figure 3.1-10); such land uses would be designed to encourage alternative forms of transportation, and surface parking lots would be limited or replaced with other forms of parking. When facilities such as parking lots are replaced with buildings, these replacements may reduce nighttime sources of light, because parking lots are often more brightly lit during the nighttime than most buildings. Infill development of underutilized or vacant parcels may result in new light sources, but they would likely be congruous with nearby light sources (e.g., lighting from shop windows or residential windows). Furthermore, as the infill development facilitated by the 2040 General Plan would largely be mixed-use with residential units on the upper stories and retail stores or services on the ground floor, light from windows at light would be limited to normal business hours for the ground floor and would be filtered or obscured by window coverings in the residential units.

Division D3-7 of the San Ramon Municipal Code provides general development standards related to outdoor lighting. Section D3-7 (C) requires a comprehensive lighting plan be submitted to the Planning Department during the planning application process. Section D3-7 (H) specifically requires light fixtures to be shielded and directed downward and away from adjoining properties and public rights-of-way, so that no on-site light fixtures directly illuminate off-site areas. Section D3-33 includes lighting requirements and limitations specific to parking areas and provides maximum illumination averages for residential and nonresidential land uses. Section D5-5 (2)(b) requires potential development identified as Hillside, Creek, and Ridgeline Areas by the General Plan Open Space and Conservation Element to design projects and site lighting to minimize off-site visibility and glare. Compliance with Division D3-7, D33-3, and D5-5 of the San Ramon Municipal Code would reduce ambient light levels, light spillage, and to confine glare and reflections within the site boundaries. Further, as detailed below, the 2040 General Plan includes Policy 4.8-I-3 to reduce light pollution through San Ramon-wide lighting standard refinement and enforcement.

Guiding Policy 4.8-G-1: Maintain and enhance San Ramon's identity.

Policy 4.8-I-3 Continue to refine citywide lighting standards to ensure appropriate illumination levels for residential, commercial, and industrial land uses, and that lighting is of a consistent character and quality while reducing light pollution.

While development facilitated by the 2040 General Plan would create new sources of light and glare in the General Plan area, the 2040 General Plan would reinforce and improve lighting standards and requirements outlined in the San Ramon Municipal Code to reduce light pollution and glare. Compliance with 2040 General Plan goals and policies and the San Ramon Municipal Code would ensure that light and glare would not adversely affect daytime or nighttime views in the General Plan area. Therefore, 2040 General Plan operational light and glare impacts would be less than significant.

Level of Significance

Less than significant without mitigation

3.1.4 Cumulative Impacts

The geographic scope of the cumulative aesthetics analysis is the visible areas within and surrounding the General Plan area. The cumulative analysis considers the nearby past, present, and reasonably foreseeable future plans and projects listed in Table 3-1 (refer to Chapter 3, *Environmental Impact Analysis*) located in San Ramon, Danville, and unincorporated Contra Costa County, in addition to the proposed plan.

Scenic Vistas, Scenic Resources, and Visual Character

Development facilitated by the proposed plan, in conjunction with other cumulative plans and projects listed in Table 3-1 could result in impacts to scenic vistas, scenic resources, and visual quality, although largely visual quality would improve with development replacement of aging buildings and sparsely landscaped areas. Cumulative plans and projects are anticipated to increase development in areas already developed with other uses. Cumulative plans and projects located in San Ramon, adjacent Danville, and unincorporated Contra Costa County would be required to undergo analysis for impacts related to scenic vistas, scenic resource, and visual quality. These impacts would be mitigated by design guidelines, regulations, policies, and project-specific mitigation measures, thereby limiting damage to existing scenic resources and enhancing the visual

quality of areas where development occurs. Nevertheless, San Ramon's contribution to potential cumulative aesthetic impacts would not be cumulatively considerable. Consequently, future residential development facilitated by cumulative development would not result in significant cumulative environmental impacts in conflict with requirements for preserving scenic vistas, scenic resources in State- or locally designated highways or drives, or visual quality. Therefore, the cumulative impact related to scenic vistas, scenic resources, and visual character would be less than significant.

Light and Glare

Cumulative plans and projects in San Ramon, Danville, and unincorporated Contra Costa County would be required to undergo project-specific analysis for impacts related to light and glare. Such impacts would be mitigated by design guidelines, regulations, policies, and project-specific mitigation measures, thereby limiting damage related to light and glare in and near areas where development occurs. Nevertheless, San Ramon's contribution to potential cumulative aesthetic impacts would not be cumulatively considerable. Consequently, future development facilitated by cumulative plans and projects would not result in significant cumulative environmental impacts in conflict with requirements for limiting the effects of light and glare. Therefore, the cumulative impact related to light and glare would be less than significant.

Overall Level of Cumulative Significance

Less than significant

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3.2 Air Quality

3.2.1 Introduction

This section describes existing air quality conditions regionally and within the City of San Ramon as well as the relevant regulatory framework. This section also analyzes the possible impacts related to air quality (specifically with regard to emissions of criteria pollutants and toxic air contaminants) that could result from implementation of the 2040 General Plan. Information included in this section is based partially on the vehicle miles traveled (VMT) data drawn from the San Ramon 2040 General Plan Transportation Impact Assessment (TIA) report, which is included as Appendix E to this EIR.

3.2.2 Environmental Setting

Regional Climate and Meteorology

San Ramon is located in Contra Costa County and is in the Diablo and San Ramon Valleys region of the San Francisco Bay Area Air Basin (SFBAAB), which is a subregion of the SFBAAB. The SFBAAB includes the counties of San Francisco, Santa Clara, San Mateo, Marin, Napa, Contra Costa, and Alameda, along with the southeast portion of Sonoma County and the southwest portion of Solano County. Contra Costa County is bounded on the west by the San Francisco Bay and Alameda County, on the east by San Joaquin County, on the south by Alameda County, and on the north by Suisun Bay.

The Diablo and San Ramon Valleys subregion lays east of the Coast Range. The Diablo Valley is bordered in the north by the Carquinez Strait and in the south by the San Ramon Valley. The San Ramon Valley extends south from Walnut Creek to Dublin with its southern end opening onto the Amador Valley. The mountains on the west side of the Diablo and San Ramon Valleys block most of the marine air from reaching the valleys, though some marine air blows through the gaps in the hills (e.g., Crow Canyon Road). During the daytime, there are two predominant flow patterns: an upvalley flow from the north and a westerly flow (wind from the west) across the lower elevations of the Coast Range. Pollution potential is relatively high in these valleys. On winter evenings, light winds combined with surface-based inversions and terrain that restricts air flow can cause pollutants levels to build up. In the summer months, ozone and ozone precursors are often transported into the valleys from both the central SFBAAB and the Central Valley. San Ramon's meteorology is affected by its inland location and its proximity to the Diablo and San Ramon Valleys.[1]

The average daily temperature in San Ramon (based on meteorology data measured at the Livermore Municipal Airport, the closest station that collects meteorology data) is 61 degrees Fahrenheit (°F), the average low temperature is 47°F, and the average high temperature is 75°F.[2] The average wind speed is 7.7 miles per hour.[3]

In winter, the SFBAAB experiences periods of storminess, moderate-to-strong winds, and periods of stagnation with very light winds. Winter stagnation episodes are characterized by outflow from the

[1] Bay Area Air Quality Management District [BAAQMD]. 2017a. California Environmental Quality Act Air Quality Guidelines. May. https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en (accessed March 2023).
[2] Iowa Environmental Mesonet. 2022a. CA_ASOS Livermore Monthly Summaries. N.d. https://mesonet.agron.iastate.edu/sites/monthlysum.php?station=LVK&network=CA_ASOS (accessed March 2023).
[3] Iowa Environmental Mesonet. 2022b. CA_ASOS Livermore Wind Roses. N.d. https://mesonet.agron.iastate.edu/sites/windrose.phtml?station=LVK&network=CA_ASOS (accessed March 2023).

Central Valley, nighttime drainage flows in coastal valleys, weak onshore flows in the afternoon, and otherwise light and variable winds.

A primary factor in air quality is the mixing depth (the vertical air column available for dilution of contaminant sources). Generally, the temperature of air decreases with height, creating a gradient from warmer air near the ground to cooler air at elevation. This is caused by most of the sun's energy being converted to sensible heat at the ground, which in turn warms the air at the surface. The warm air rises in the atmosphere, where it expands and cools. Sometimes, however, the temperature of air actually increases with height. This condition is known as temperature inversion, because the temperature profile of the atmosphere is "inverted" from its usual state. Over the SFBAAB, the frequent occurrence of temperature inversions limits mixing depth and, consequently, limits the availability of air for dilution.

Air Pollutant Types, Sources, and Effects

Criteria Air Pollutants

Concentrations of criteria air pollutants are used as indicators of air quality conditions. Air pollutants are termed criteria air pollutants if they are regulated by developing specific public health and welfare-based criteria as the basis for setting permissible levels. According to the United States Environmental Protection Agency (USEPA), criteria air pollutants are ozone, particulate matter equal to or less than 10 microns in diameter (PM_{10}), PM equal to or less than 2.5 microns in diameter ($PM_{2.5}$), nitrogen dioxide (NO_2), carbon monoxide (CO), lead, and sulfur dioxide (SO_2). Criteria air pollutants are defined in more detail under Section 3.2.3, Regulatory Framework. Table 3.2-1 provides a summary of the types, sources, and effects of these criteria air pollutants of national and California concern.

Table 3.2-1 Description of Criteria Air Pollutants of National and California Concern

Criteria Air Pollutant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Ozone	Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), nitrous oxides (NO_X), and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind.	Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NO_X) are mobile sources (on-road and off-road vehicle exhaust).	Irritate respiratory system; reduce lung function; breathing pattern changes; reduction of breathing capacity; inflame and damage cells that line the lungs; make lungs more susceptible to infection; aggravate asthma; aggravate other chronic lung diseases; cause permanent lung damage; some immunological changes; increased mortality risk; vegetation and property damage.
Particulate matter (PM_{10}) Particulate matter ($PM_{2.5}$)	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, (one micron is one-millionth of a	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	▪ Short-term exposure (hours/days): irritation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravate existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias.

Criteria Air Pollutant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
	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.	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.	▪ Long-term exposure: reduced lung function; chronic bronchitis; changes in lung morphology; death.
Nitrogen dioxide (NO_2)	During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides—NO_X (NO, NO_2, NO_3, N_2O, N_2O_3, N_2O_4, and N_2O_5). NO_X is a precursor to ozone, PM_{10}, and $PM_{2.5}$ formation. NO_X can react with compounds to form nitric acid and related small particles and result in PM related health effects.	NO_X is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. Nitrogen dioxide forms quickly from NO_X emissions. NO_2 concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.	Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; contributions to atmospheric discoloration; increased visits to hospital for respiratory illnesses.
Carbon monoxide (CO)	CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.	CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources.	Ranges depending on exposure: slight headaches; nausea; aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; decreased exercise tolerance in persons with peripheral vascular disease and lung disease; impairment of central nervous system functions; possible increased risk to fetuses; death.
Sulfur dioxide (SO_2)	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO_X) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below state and federal standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM_{10}.	Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethyl sulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

Criteria Air Pollutant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Lead	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.

Sources: Bay Area Air Quality Management District (BAAQMD); California Environmental Protection Agency (Cal/EPA) 2002; California Air Resources Board (CARB); United States Environmental Protection Agency (USEPA); National Toxicology Program

Toxic Air Contaminants

Concentrations of toxic air contaminants (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 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 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 those TACs that may cause cancer, there is no concentration that does not 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 NO_2 and carbon dioxide (CO_2) for which acceptable levels of exposure can be determined and for which the State and federal governments have set ambient air quality standards.

TACs are separated into carcinogens and noncarcinogens based on the nature of 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. For noncarcinogenic substances, there is generally assumed to be a safe level of exposure 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 levels.

To date, the California Air Resources Board (CARB) has designated nearly 200 compounds as TACs. CARB has implemented control measures for a number of 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 diesel particulate matter (DPM) from diesel-fueled engines. Common TACs of national and California concern include: DPM, volatile organic compounds (VOCs), benzene, asbestos, hydrogen sulfide, sulfates, visibility-reducing particulates, vinyl chloride, and lead. Table 3.2-2 provides a summary of these types, sources, and effects of TACs of national and California concern.

Table 3.2-2 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)	Diesel PM 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.
Volatile Organic Compounds (VOCs)	Reactive organic gases (ROGs), or VOCs, are defined as any compound of carbon—excluding CO, CO_2, 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 VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs 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 VOCs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of VOCs 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 VOCs have been classified as toxic air contaminants.
Benzene	Benzene is a VOC. 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 two 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.

Toxic Air Contaminant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
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 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	The sulfate ion is a polyatomic anion with the empirical formula SO_4^{2-} 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 compounds is combustion of gasoline and diesel fuel.	(a) Decrease in ventilatory function; (b) aggravation of asthmatic symptoms; (c) aggravation of cardio-pulmonary 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.

Toxic Air Contaminant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Vinyl Chloride	Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, CARB 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	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.

Sources: Bay Air Quality Management District (BAAQMD); California Environmental Protection Agency (Cal/EPA); California Air Resources Board (CARB); United States Environmental Protection Agency (USEPA); National Toxicology Program

Air Quality

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.

Regional Air Quality

The Bay Area Air Quality Management District (BAAQMD) is the regional agency with jurisdiction for regulating air quality within the nine-county SFBAAB, which includes Contra Costa, Alameda, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the western portion of Solano County, and the southern portion of Sonoma County.

AIR POLLUTANT STANDARDS

Air pollutant standards have been identified by USEPA and CARB for the following six criteria air pollutants that affect ambient air quality: ozone, NO_2, CO, SO_2, lead, PM_{10}, and $PM_{2.5}$ These air pollutants are called "criteria air pollutants," because they are regulated by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. California has also established standards for toxic air contaminants such as visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. Table 3.2-3 presents the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for these aforementioned air pollutants. California air quality standards are identical to or stricter than federal standards for all

criteria pollutants. It should be noted that there are no State or federal air quality standards for VOCs, benzene, or DPM.

Ambient air pollutant concentrations in the SFBAAB are measured at air quality monitoring stations operated by CARB and BAAQMD. Air quality monitoring stations measure pollutant ground-level concentrations (typically, ten feet above ground level). In general, the SFBAAB experiences low concentrations of most pollutants compared to federal or State standards.

AIR POLLUTANT ATTAINMENT DESIGNATIONS

Both USEPA and CARB use ambient air quality monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify the areas with air quality problems and initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. "Attainment" status refers to those regions that are meeting federal and/or State standards for a specified criteria pollutant. "Nonattainment" refers to regions that do not meet federal and/or State standards for a specified criteria pollutant. "Unclassified" refers to regions where there is not enough data to determine the region's attainment status for a specified criteria air pollutant. Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the three-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

The current attainment designations for the SFBAAB are also shown in Table 3.2-3. The SFBAAB is designated as nonattainment for the State ozone, PM_{10}, and $PM_{2.5}$ standards, nonattainment for the national ozone and $PM_{2.5}$ standards, and unclassified for the national PM_{10} standard.

Table 3.2-3 Federal and State Air Quality Standards and SFBAAB Attainment Status

		California Standards		National Standards	
Pollutant	**Averaging Time**	**Concentration**	**Attainment Status**	**Concentration**	**Attainment Status**
Ozone	8 Hour	0.070 ppm	N	0.070 ppm	N
	1 Hour	0.09 ppm	N		
Carbon Monoxide	8 Hour	9.0 ppm	A	9 ppm	U/A
	1 Hour	20 ppm	A	35 ppm	U/A
Nitrogen Dioxide	1 Hour	0.18 ppm	A	0.100 ppm	U/A
	Annual Arithmetic Mean	0.030 ppm	A	0.053 ppm	U
Sulfur Dioxide	24 Hour	0.04 ppm	A		
	1 Hour	0.25 ppm	A	0.075 ppm	A/U
Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	N		
	24 Hour	50 µg/m^3	N	150 µg/m^3	U
Particulate Matter - Fine ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	N	12 µg/m^3	U/A
	24 Hour			35 µg/m^3	N

Pollutant	Averaging Time	California Standards		National Standards	
		Concentration	Attainment Status	Concentration	Attainment Status
Lead	Calendar Quarter			1.5 µg/m^3	A
	Rolling 3 Month Average			0.15 µg/m^3	U/A
	30 Day Average	1.5 µg/m^3)	A		
Hydrogen Sulfide	1 Hour	0.03 ppm	U		
Vinyl Chloride (chloroethene)	24 Hour	0.010 ppm	No information available		
Visibility Reducing particles	8 Hour (10:00 to 18:00 PST)		U		

A=Attainment N=Nonattainment U=Unclassified; mg/m^3=milligrams per cubic meter ppm=parts per million, µg/m^3=micrograms per cubic meter

Source: BAAQMD. 2022a. BAAQMD CEQA Air Quality Guidelines. https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines (accessed June 2023).

Local control in air quality management is provided by CARB through county-level or regional (multi-county) air districts. CARB establishes Statewide air quality standards and is responsible for control of mobile emission sources, while the local air districts are responsible for enforcing standards and regulating stationary sources. CARB has established 15 air basins Statewide. San Ramon is located in the SFBAAB, which is under the jurisdiction of BAAQMD.

Existing Local (General Plan Area) Air Quality

The San Ramon-9885 Alcosta Boulevard monitoring station at 9885 Alcosta Boulevard in San Ramon is the closest air quality monitoring station to San Ramon and is located in the southern portion of San Ramon. The San Ramon-9885 Alcosta Boulevard monitoring station measures 8-hour ozone, hourly ozone, and NO_2. For $PM_{2.5}$ and PM_{10} measurements, closest data for San Ramon is from the Concord-2975 Treat Boulevard monitoring station located at 2975 Treat Boulevard in Concord.

Table 3.2-4 summarizes the representative annual air quality data for the General Plan area over the years 2019 through 2021 at the San Ramon-9885 Alcosta Boulevard and Concord-2975 Treat Boulevard monitoring stations. As shown in Table 3.2-4, the hourly ozone State standard was exceeded in 2019, while the 8-hour federal and State standards were exceeded in every year from 2019 to 2021. The PM_{10} State standard was exceeded in 2020 and 2021 and the PM_{10} federal standard was exceeded in 2020. The $PM_{2.5}$ federal standard was exceeded in 2020 and 2021.[4] No other air quality standards were exceeded.

[4] CARB. 2022. Top 4 Summary: Select Pollutant, Years, & Area. N.d. https://www.arb.ca.gov/adam/topfour/topfour1.php (accessed March 2023).

Table 3.2-4 Ambient Air Quality Monitoring Data

Pollutant	2019	2020	2021
Ozone (ppm), Worst 1-Hour[1]	0.095	0.086	0.093
Number of days of State exceedances (>0.09 ppm)	1	0	0
Ozone (ppm), 8-Hour Average[1]	0.072	0.075	0.078
Number of days of State exceedances (>0.07 ppm)	1	3	2
Number of days of Federal exceedances (>0.07 ppm)	1	3	2
Nitrogen Dioxide, Worst 1-Hour	0.0449	0.0645	0.0302
Number of days above CAAQS (>0.180 ppm)	0	0	0
Number of days above CAAQS (>0.180 ppm)	0	0	0
Particulate Matter <10 microns, μg/m^3, Worst 24 Hours[1]	36.0	167.0	26.0
Number of days above State standard (>50 μg/m^3)	0	1	2
Number of days above Federal standard (>150 μg/m^3)	0	1	0
Particulate Matter <2.5 microns, μg/m^3, Worst 24 Hours[1]	28.2	121.4	43.7
Number of days above Federal standard (>35 μg/m^3)	0	16	2

ppm = parts per million; μg/m^3 = micrograms per cubic meter

[1] Measurements taken from the San Ramon-9885 Alcosta Boulevard Station

[2] Measurements taken from the Concord-2975 Treat Boulevard Station

Source: CARB. 2022a. Top 4 Pollutant Summary. https://www.arb.ca.gov/adam/topfour/topfour1.php (accessed April 2023).

MOBILE EMISSIONS

The primary source of mobile air pollutants (both criteria air pollutant and TACs) in the vicinity of the General Plan area is motor-related vehicle trips associated with the local residential, commercial, institutional, and recreational uses.

STATIONARY EMISSIONS

The primary source of stationary air pollutants (both criteria air pollutant and TACs) in the vicinity of the General Plan area is building-related energy use associated with the local residential, commercial, industrial, and institutional uses. Other sources of stationary emissions include landscape maintenance and consumer products from residential and commercial uses. Within the General Plan area, there are 61 facilities regulated by the BAAQMD.[5]

Air Pollution Sensitive Receptors

Sensitive Receptor Types

Air pollution does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects related to air pollutants exposure than others. Land uses such as residences, schools, day care centers, hospitals, nursing and convalescent homes, and parks are considered to be the most sensitive to poor air quality, because the population groups associated with these uses have increased susceptibility to respiratory distress or, as in the case of

[5] BAAQMD. 2022b. Interactive Data Maps. Last updated June 9. https://www.baaqmd.gov/about-air-quality/interactive-data-maps (accessed April 2023).

residential receptors, their exposure time is greater than that for other land uses. Therefore, these groups are referred to as sensitive receptors. Exposure assessment guidance typically assumes that residences would be exposed to air pollution 24 hours per day, 350 days per year, for 30 years. BAAQMD defines sensitive receptors as children, adults, and seniors occupying or residing in residential dwellings, schools, day care centers, hospitals, and senior-care facilities.

Sensitive Receptors in General Plan Area

Air pollution sensitive receptors in the General Plan area include single- and multi-family residential land uses, schools, daycares, senior care facilities, and public parks and recreational facilities. The commercial, including office, land uses throughout the General Plan area are not considered air pollution sensitive receptors.

3.2.3 Regulatory Framework

Federal Regulations

Clean Air Act and National Ambient Air Quality Standards

Congress established much of the basic structure of the Clean Air Act (CAA) in 1970, and made major revisions in 1977 and 1990. Six common air pollutants (also known as criteria pollutants) are addressed in the CAA. These are particulate matter, ground-level ozone, CO, sulfur oxides, nitrogen oxides, and lead. USEPA 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. 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 federal standards were set to protect public health, including that of sensitive individuals; thus, USEPA 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 control plan referred to as a State Implementation Plan (SIP). The federal Clean Air Act 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.

USEPA 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, USEPA 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, increasingly more stringent Tier 2, Tier 3, and Tier 4 (interim and final) standards were adopted by US EPA, as well as by CARB. 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 Regulations

California Air Quality Control Plan (State Implementation Plan)

A State Implementation Plan (SIP) is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The SIP for California is administered by CARB, 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, which is sent to CARB to be approved and incorporated into the California SIP. 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.

Areas designated nonattainment must develop air quality plans 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 and California Ambient Air Quality Standards

The California CAA, signed into law in 1988, requires all areas of the State to make incremental progress toward the achievement of the California Ambient Air Quality Standards (CAAQS). CARB is the State air pollution control agency and is a part of CalEPA. CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California, and for implementing the requirements of the California CAA. CARB overseas local district compliance with federal and California laws, approves local air quality plans, submits the State implementation plans to the USEPA, monitors air quality, determines and updates State area designations and maps, and sets emissions standards for new mobile sources and off-road vehicles pursuant to California waiver and authorization requests, consumer products, small utility engines, and fuels.

The California CAA requires CARB to establish ambient air quality standards for California, known as CAAQS. Similar to the NAAQS, CAAQS have been established for criteria pollutants and standards are established for vinyl chloride, hydrogen sulfide, sulfates, and visibility-reducing particulates. In general, the CAAQS are more stringent than the NAAQS on criteria pollutants. The California CAA requires all local air districts to endeavor to make incremental progress toward attaining the CAAQS. The California CAA specifies that local air districts focus attention on reducing the emissions from transportation and area-wide emission sources and provides districts with the authority to regulate indirect sources as long as the regulations do not infringe on local land use authority.

In 2017, CARB released a technical advisory on reducing air pollution exposure from near high-volume roadways that is a technical supplement to CARB's air quality and Land Use Handbook: A Community Health Perspective. Since the publication of the handbook, research has demonstrated the public health, climate, financial and other benefits of compact, infill development along transportation corridors, and that exposures can be reduced with new strategies. As described in the technical advisory, California has implemented various measures to improve air quality and reduce exposure to roadway vehicle emissions. These include the Diesel Risk Reduction Plan, which

aims to reduce particulate matter emissions from diesel vehicles. The continued electrification of California's vehicle fleet would also reduce $PM_{2.5}$ levels, and ongoing efforts to reduce emissions from cars and trucks and to move vehicles towards "zero emission" alternatives will continue to drive down roadway vehicle pollution.

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

CARB 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, there are thresholds set by regulatory agencies 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 ambient air quality standards. 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

CARB 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 State Implementation Plan. In 2012, CARB 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.

California On-Road Heavy-duty Vehicle Program

CARB 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. CARB 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.

California Airborne Toxics Control Measure for Asbestos

CARB has adopted Airborne Toxics Control Measures 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, CARB approved an Air Toxic Control Measure 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 air district prior to the start of a project.

Construction sometimes requires the demolition of existing buildings where construction occurs. Asbestos is also found in a natural state, known as naturally occurring asbestos. 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, can be found 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. San Ramon is located in an area likely to not contain naturally occurring asbestos.

Verified Diesel Emission Control Strategies

USEPA and CARB tiered off-road emission standards only apply to new engines and off-road equipment can last several years. CARB 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 vehicles, to help reduce emissions from existing engines. VDECS are designed primarily for the reduction of diesel PM emissions and have been verified by CARB. 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.

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 (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, CARB has identified more than 21 TACs and has adopted the USEPA list of 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 CARB 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 SFBAAB, the BAAQMD administers the Carl Moyer Program. The program establishes 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.

Regional and Local Regulations

Bay Area Clean Air Plan

The BAAQMD is responsible for assuring that the federal and state ambient air quality standards are attained and maintained in the Bay Area. BAAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, as well as many other activities.

BAAQMD adopted the *Bay Area Clean Air Plan: Spare the Air, Cool the Climate (Bay Area Clean Air Plan)* on April 19, 2017 as an update to the 2010 Clean Air Plan. The 2017 Clean Air Plan, which focuses on protecting public health and the climate, defines an integrated, multi-pollutant control strategy that includes feasible measures to reduce emissions for four categories: ground-level ozone and its precursors, ROG and NO_X; PM (primarily $PM_{2.5}$, and precursors to secondary $PM_{2.5}$); TACs, and greenhouse gas emissions. The control measures are categorized based on the economic sector framework and include stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, and water. To protect public health, the control strategy will decrease population exposure to PM and TACs in communities that are most impacted by air pollution with the goal of eliminating disparities in exposure to air pollution between communities. The control strategy will also protect the climate by reducing greenhouse gas emissions and developing a long-range vision of how the Bay Area could look and function in a year 2050 post-carbon economy.

BAAQMD Particulate Matter Plan

To fulfill federal air quality planning requirements, 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, USEPA 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. Despite this USEPA action, the SFBAAB will continue to be designated as nonattainment for the national 24-hour $PM_{2.5}$ standard until BAAQMD submits a redesignation request and a maintenance plan to USEPA, and USEPA approves the proposed redesignation.

The SFBAAB is in nonattainment for the federal PM_{10} and federal $PM_{2.5}$ standards. USEPA lowered the 24-hour $PM_{2.5}$ standard from 65 micrograms per cubic meter ($\mu g/m^3$) 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.

On December 8, 2011, CARB submitted a "clean data finding" request to USEPA on behalf of the Bay Area. If the clean data finding request is approved, then USEPA 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, 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; and
- Amendments to the BAAQMD's New Source Review regulation to address $PM_{2.5}$.

BAAQMD Regulations

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. Although emergency generators are intended to be used 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 for Toxics.

REGULATION 8, RULE 3 (ARCHITECTURAL COATINGS)

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

REGULATION 8, RULE 15 (EMULSIFIED AND LIQUID ASPHALTS)

Although this rule does not directly apply to the proposed plan, 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 1, RULE 301 (ODOROUS EMISSIONS)

BAAQMD enforces odor control by helping the public to document a public nuisance. Upon receipt of a complaint, BAAQMD sends an investigator to interview the complainant and to locate the odor source if possible. 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 a number of persons. Regulation 7 specifies limits for the discharge of odorous substances where 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 4 parts of odor-free air, and specifies maximum limits on the emission of certain odorous compounds.

REGULATION 9, RULE 4 (NITROGEN OXIDES FROM NATURAL GAS-FIRED FURNACES)

This rule bans the sale, installation, or offering for sale of the following within the SFBAAB: any stationary residential natural-gas fired fan type central furnace manufactured after January 1, 1984, that emits more than 40 nanograms of nitrogen oxides per joule of heat output; any natural gas-fired fan type central furnace manufactured after January 1, 2024, that emits more than 14 nanograms of nitrogen oxides per joule of heat output; and, any natural gas-fired furnace manufactured after January 1, 2029, that emits more than 0.0 nanograms of nitrogen oxides per joule of heat output.

REGULATION 9, RULE 6 (NITROGEN OXIDES FROM NATURAL GAS-FIRED BOILERS AND WATER HEATERS)

This rule bans the sale, installation, or offering for sale of the following within the SFBAAB: any natural gas-fired storage tank water heater, manufactured after July 1, 1992, with a rated heat input capacity of 75,000 BTU/hour or less, that emits more than 40 nanograms of nitrogen oxides per joule of heat output; any natural gas-fired storage tank water heater less than or equal to 50 gallons capacity that is manufactured after January 1, 2009, and that emits more than 10 nanograms of nitrogen oxides per joule of heat output[6]; any natural gas-fired storage tank water heater greater than 50 gallons capacity that is manufactured after January 1, 2010, and that emits more than 10 nanograms of nitrogen oxides per joule of heat output[7]; any natural gas-fired storage tank water heater that is manufactured after January 1, 2011, and that emits more than 10 nanograms of nitrogen oxides per joule of heat output[8]; and, any natural gas-fired storage tank water heater that is manufactured after January 1, 2027, with a rated heat input rating of 75,000 BTU/hour or less, that emits more than 0 nanograms of nitrogen oxides per joule of heat output.[9]

Plan Bay Area

In October 2021, the Metropolitan Transportation Commission (MTC) approved Plan Bay Area 2050. 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. Plan Bay Area is also considered the Association of Bay Area Governments (ABAG)/MTC Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). In accordance with SB 743, Plan Bay Area included elements designed to encourage the type of land-use development to meet three primary objectives. First, Roadway Level of Service (LOS) could not be considered an environmental impact under the California Environmental Quality Act (CEQA). Second, it introduced changes to Vehicle Miles Traveled (VMT) per capita as a determinant of environmental impact. Third, the use of VMT as an environmental impact in CEQA is considered a mechanism for achieving State and regional GHG reduction goals. As a regional land use plan, Plan Bay Area aims to reduce per-capita GHG emissions through the promotion of more compact, mixed-use residential and commercial neighborhoods located near transit.

San Ramon General Plan

The current San Ramon General Plan contains policies related to air quality, but they would be replaced by the proposed 2040 General Plan.

[6] This does not apply to direct-vent, power-vent, power direct-vent water storage tanks heaters and water heaters used for mobile homes.
[7] This does not apply to direct-vent, power-vent, power direct-vent water storage tanks heaters and water heaters used for mobile homes.
[8] This does not apply to water heaters used for mobile homes.
[9] This does not apply to water heaters used for mobile homes.

3.2.4 Impacts and Mitigation Measures

Significance Criteria

The City of San Ramon utilizes the following 2022 CEQA Guidelines Appendix G significance criteria questions related to Air Quality.

Would the 2040 General Plan:

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?

Approach to Analysis

This analysis uses the BAAQMD 2022 *CEQA Air Quality Guidelines* to evaluate air quality.

Construction Criteria Pollutant and TAC Emissions

Construction-related emissions are limited in duration but may still cause adverse air quality impacts. Construction associated with implementation of the proposed plan would generate emissions from three primary sources: the operation of construction vehicles (e.g., scrapers, loaders, dump trucks, etc.); ground disturbance during site preparation and grading, which creates fugitive dust; and the application of asphalt, paint, or other oil-based substances.

At this time, the pace, location and duration associated with constructing projects permitted by the proposed plan are not sufficiently detailed to quantify a specific emission impact, and thus it would be speculative to do so. Rather, construction criteria pollutant and TAC emissions impacts for the 2040 General Plan are discussed qualitatively pursuant to the four significance criteria identified above. The OEHHA recommends evaluating risk exposure from certain short-term projects (e.g., construction projects) lasting more than two months.

Operation Criteria Pollutant and TAC Emissions

Based on plan-level guidance from the BAAQMD 2022 *CEQA Air Quality Guidelines,* long-term operational criteria pollutant and TAC emissions associated with implementation of the proposed plan are discussed qualitatively by comparing the proposed plan to the 2017 Clean Air Plan goals, policies, and control measures. In addition, comparing the rate of increase of plan VMT and population is recommended by BAAQMD for determining significance of criteria pollutants. If the proposed plan does not meet either criterion, then impacts would be potentially significant.

Odors

The impact analysis qualitatively evaluates the types of land uses facilitated by the proposed plan to evaluate whether major sources of anticipated odors would be present and, if so, whether those sources would likely generate objectionable odors. Screening distance for potential odor impacts are shown in Table 3.2-5. For a plan level analysis, BAAQMD requires the identification of potential existing and planned location of odor sources and policies to reduce odors.

Table 3.2-5 BAAQMD Odor Screening-level Distances Thresholds

Land Use/Type of Operation	Plan Areas Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	2 miles
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	2 miles
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	2 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Confined Animal Facility/Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	1 mile
Metal Smelting Plants	2 miles

Source: BAAQMD 2022a

EIR Scoping Comments Consideration

No comments relevant to CEQA were received in response to the EIR NOP specific to air quality that need to be addressed in the impacts discussion.

Specific Thresholds of Significance

Consistency with Air Quality Plan

The applicable air quality plan is the BAAQMD 2017 Bay Area Clean Air Plan, which identifies measures to:

- Reduce emissions and reduce ambient concentrations of air pollutants; and
- Safeguard public health by reducing exposure to the air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily affected by air pollution.

The 2040 General Plan would be consistent with the Bay Area Clean Air Plan if it would support the Clean Air Plan goals, include applicable control measures, and not disrupt or hinder implementation of Clean Air Plan control. Consistency with the Clean Air Plan is the basis for determining whether the proposed plan would conflict with or obstruct implementation of an applicable air quality plan.

Construction Criteria Pollutant and TAC Emissions Thresholds

BAAQMD's 2022 *CEQA Air Quality Guidelines* have no plan-level significance thresholds for construction air pollutants emissions. However, they do include the individual project-level thresholds for construction-related and long-term operational emissions of air pollutants. These thresholds represent the levels at which a project's individual emissions of criteria air pollutants or

precursors would result in a cumulatively considerable contribution to the SFBAAB's existing air quality conditions. Construction emissions associated with plan implementation are discussed qualitatively to evaluate potential air quality impacts.

For health risks associated with TAC and $PM_{2.5}$ emissions, the BAAQMD 2022 *CEQA Air Quality Guidelines* state a project would result in a significant impact if the any of the following thresholds are exceeded:

- Non-compliance with Qualified Community Risk Reduction Plan;
- Increased cancer risk of > 10.0 in a million;
- Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute); or
- Ambient $PM_{2.5}$ increase of > 0.3 µg/m^3 annual average

In addition, a project would have a cumulatively considerably impact associated with health risks from TAC and $PM_{2.5}$ emissions if the aggregate total emissions of all past, present, and foreseeable future sources within a 1,000-foot radius of the property line of the source plus the project's contribution exceed any of the following thresholds:

- Non-compliance with Qualified Community Risk Reduction Plan;
- Increased cancer risk of > 100.0 in a million;
- Increased non-cancer risk of > 10.0 Hazard Index (Chronic or Acute); or
- Ambient $PM_{2.5}$ increase of > 0.8 µg/m^3 annual average

Operational Criteria Pollutant and TAC Emissions Thresholds

BAAQMD's 2022 *CEQA Air Quality Guidelines* contain specific operational plan-level significance thresholds for criteria air pollutants. Plans must show the following over the planning period:

- Consistency with current air quality plan control measures
- VMT or vehicle trips (VT) increase is less than or equal to the plan's projected population increase

If a plan can demonstrate consistency with both of these criteria, then impacts are considered less than significant.

The same thresholds listed above for construction health risks from TAC and $PM_{2.5}$ would apply to operation.

Odors

The significance thresholds for odor impacts are qualitative in nature. Specifically, an odor-generating source with five or more confirmed complaints in the new source area per year averaged over three years is considered to have a significant impact on receptors within the screening distances shown above under Approach to Analysis.

Impact Evaluation

Air Quality Management Plans Consistency

Significance Criterion a:	Would the proposed plan conflict with or obstruct implementation of the applicable air quality plan?

Impact AQ-1 IMPLEMENTATION OF THE 2040 GENERAL PLAN WOULD BE CONSISTENT WITH THE BAAQMD 2017 CLEAN AIR PLAN. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction and Operation

2040 GENERAL PLAN

The most recently adopted air quality plan in the SFBAAB is the 2017 Clean Air Plan.[10] The 2017 Clean Air Plan is a roadmap showing how the San Francisco Bay Area will achieve compliance with the State one-hour ozone standard as expeditiously as practicable, and how the region will reduce transport of ozone and ozone precursors to neighboring air basins. The 2017 Clean Air Plan does not include control measures that apply directly to construction and operation of individual development projects. Instead, the control strategy includes stationary-source control measures to be implemented through the BAAQMD regulations; mobile-source control measures to be implemented through incentive programs and other activities; and transportation control measures to be implemented through transportation programs in cooperation with the Metropolitan Transportation Commission (MTC), local governments, transit agencies, and others. The 2017 Clean Air Plan also represents the Bay Area's most recent triennial assessment of the region's strategy to attain the state one-hour ozone standard. In this, the 2017 Clean Air Plan replaces the 2010 Clean Air Plan. Under BAAQMD's methodology, a determination of consistency with *CEQA Guidelines* thresholds should demonstrate that a project:

- Supports the primary goals of the 2017 Clean Air Plan;
- Includes applicable control measures from the 2017 Clean Air Plan; and
- Does not disrupt or hinder implementation of any 2017 Clean Air Plan control measures.

The following includes a discussion of consistency with these criteria for the 2040 General Plan. The 2017 Clean Air Plan contains 85 control strategies aimed at reducing air pollution and protecting the climate in the Bay Area. For consistency with climate planning efforts at the State level, the control strategies in the 2017 Clean Air Plan are based on the same economic sector framework used by CARB, which encompass stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and super-GHG pollutants. Table 3.2-6 identifies applicable control measures, discusses 2040 General Plan consistency, and shows corresponding policies from the 2040 General Plan that address the measures.

[10] BAAQMD. 2017b. Spare the Air Cool the Climate Final 2017 Clean Air Plan. April. 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 March 2023).

Table 3.2-6 Clean Air Plan Control Measures Consistency Analysis – 2040 General Plan

Control Measures	Consistency
Transportation	
TR2: Trip Reduction Programs. Implement the regional Commuter Benefits Program (Rule 14-1) that requires employers with 50 or more Bay Area employees to provide commuter benefits. 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. Fund various employer-based trip reduction programs.	**Consistent:** Development of the 2040 General Plan would promote compatible land uses resulting in San Ramon residents living and working in closer proximity to each other. Proposed Traffic and Circulation Element, Air Quality and Greenhouse Gas Element, and Economic Development Element policies such as 5.6-I-2, 12.7-I-1, and 2.3-I-18 encourage employer-based trip reduction programs and TDM programs for commuters. Proposed Traffic and Circulation Element policy 5.7-I-1 establishes a network of bicycle routes for commuters. **Policy 5.6-I-2:** Encourage and assist major employers and property managers of commercial sites with 50 or more employees to reduce the number of single-occupant vehicles by participating in the City's TDM programs, including the commuter benefit program, and programs provided by the Bay Area Air Quality Management District. **Policy 5.7-I-1:** Establish a network of on- and off-street bicycle routes to encourage their use for commute, recreational, and other trips. Improve and expand bicycle routes for commuters in San Ramon and between San Ramon and neighboring cities. **Policy 12.7-I-1:** The City shall encourage participation in feasible, affordable, innovative and flexible employer-based trip reduction programs for employees and encourage employer and resident participation in employer-based trip reduction programs, including, but not limited to the BAAQMD Commuter Benefit Program. **Policy 2.3-I-18:** Encourage businesses to promote the use of commute alternatives among their employees by implementing the City's Transportation Demand Management (TDM) programs.
TR3: Local and Regional Bus Service. Fund local and regional bus projects, including operations and maintenance. **TR4: Local and Regional Rail Service.** Fund local and regional rail service projects, including operations and maintenance.	**Consistent.** Proposed 2040 General Plan Guiding Policy 5.6-G-1 of the Traffic and Circulation Element focuses on reducing vehicle trips and vehicle emissions by utilizing Transportation Demand Management (TDM) strategies. In particular, the following Growth Management Element and Traffic and Circulation Element policies would encourage improved transit access and regional transit connections in San Ramon: **Policy 3.4-I-3:** Cooperate with regional and local service providers and other jurisdictions to promote local and regional public transit service. **Policy 3.4-I-4:** Support local feeder transit service to and from current and future regional transit lines. **Policy 3.4-I-5:** Preserve options for future transit use when designing improvements for roadways. **Policy 3.4-I-6:** Locate future transit uses, such as light rail or BART, in the I-680 right-of-way **Policy 5.6-I-1:** Engage with public agencies and other jurisdictions to promote local and regional public transit service in San Ramon as part of a multimodal and Complete Streets strategy. **Policy 5.6-I-3:** Encourage additional local bus or other public transportation service providers to and from regional transit lines. The City shall strive to improve the transit service to and from all neighborhoods and commercial districts in San Ramon. **Policy 5.6-I-5:** Encourage future transit uses within the I-680 corridor right-of-way and within the City of San Ramon.

Control Measures	Consistency
	Policy 5.6-I-10: Work with transit providers to situate amenity rich transit stops and shelters at convenient and safe locations. **Policy 5.6-I-11:** Promote increased transit ridership through the use of Transportation Management Associations and other employer-based transit programs, equip buses with three slot bike racks, and make transit information readily accessible in a smart phone friendly format. **Policy 5.6-I-15:** Work with local transit providers to increase and expand weekend transit service and late night Owl service from regional rail and transit hubs. **Policy 5.6-I-16:** Explore opportunities for the location or relocation of a transit center and/or multiple Mobility Hubs within Bishop Ranch Business Park to better geographically balance the public transit needs for the City.
TR6: Freeway and Arterial Operations. Improve the performance and efficiency of freeway and arterial systems through operational improvements, such as implementing the Freeway Performance Initiative, the Freeway Service Patrol and the Arterial Management Program.	**Consistent.** Proposed 2040 General Plan Guiding Policy 5.4-G-1 and the following associated policies in the Traffic and Circulation Element calls for the City to design arterial roadways to efficiently move inter-city traffic. **Policy 5.4-I-3** requires the construction of capacity and roadway efficiency improvements necessary to serve growth generated by development under the General Plan. **Policy 5.4-I-7** calls for minimizing congestion on arterials by implementing the policies in the Complete Streets, Transportation Demand Management and Public Transit sections of the Circulation Element.
TR9: Bicycle and Pedestrian Access and 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.	**Consistent**: Proposed policies in the 2040 General Plan would support an efficient and safe bicycle and pedestrian system that would improve the connectivity and accessibility throughout San Ramon. Proposed Guiding Policy 5.7-G-1 from the Traffic and Circulation Element is focused on prioritizing bicycling and walking as alternative to driving, consistent with Complete Streets concepts. Proposed policies from the Traffic and Circulation Element, Growth Management Element, Land Use Element, and Air Quality and Greenhouse Gas Element listed below would encourage bicycle and pedestrian facilities: **Policy 3.4-I-7:** Improve and expand the bicycle route network in San Ramon. **Policy 3.6-I-4:** As part of the development review process, support the accommodation of public transit, bicycle, and pedestrian access for new development. **Policy 4.8-I-5:** Encourage the linkage and integration of new development with existing neighborhoods by means of Complete Streets networks, open space areas, parks, pathways, associated rights-of-way, and/or easements as a means of enhancing pedestrian and bicycle connections. **Policy 5.6-I-7:** Encourage new development to include a mix of uses and Complete Streets concepts that will allow people to walk and bike between destinations and reduce the amount of automobile vehicle-miles-traveled. **Policy 5.7-I-1:** Establish a network of on- and off-street bicycle routes to encourage their use for commute, recreational, and other trips.

Control Measures	Consistency
	Improve and expand bicycle routes for commuters in San Ramon and between San Ramon and neighboring cities. **Policy 5.7-I-2:** Develop bicycle routes that provide access to regional employment centers, shopping centers, public facilities, transit centers, schools, and parks. **Policy 5.7-I-5:** Require bicycle parking, storage and other support facilities as part of new office, retail, housing, and public facilities developments. **Policy 5.7-I-6:** Continue to promote and implement through the development review process, continuous circulation facilities within commercial districts and residential neighborhoods to enhance connectivity and promote pedestrian and bicycle modes of transportation consistent with Complete Streets concepts. **Policy 5.7-I-9:** Implement roadway improvement projects to minimize both temporary and permanent reductions in bicycle and pedestrian mobility and/or accessibility. **Policy 5.7-I-10:** Work with neighboring jurisdictions to ensure that continuity in bicycle and pedestrian networks is provided at jurisdictional boundaries. **Policy 5.7-I-13:** Prioritize bicycle network improvements in the core area of San Ramon, including construction of new facilities and actions to remove barriers to cycling as identified in the San Ramon Bicycle Master Plan, in order to support development in the City's Priority Development Areas (PDAs). **Policy 12.5-I-2:** Support and encourage projects proposing infill, and mixed-use development that create walkable and bicycle friendly neighborhoods and communities that increase access to transit. **Policy 12.7-I-5:** Construct and promote infrastructure and facilities that support and encourages the use of low-emission transportation and alternative modes of travel, including safe and comprehensive bicycle and pedestrian system that connects all parts of the city and development standards that require installation of alternative fuel infrastructure, such as electric vehicle chargers and hydrogen fueling stations.
TR13: Parking Policies. Encourage parking policies and programs in local plans, e.g., reduce minimum parking requirements; limit the supply of off-street parking in transit-oriented areas; unbundle the price of parking spaces; support implementation of demand-based pricing (such as "SF Park") in high-traffic areas.	**Consistent**: The 2040 General Plan proposes policies that recognize that parking should be balanced with other objectives that encourage transit use, bicycling, and walking. The following Land Use Element and Traffic and Circulation Element policies that support this goal and are relevant to TR13 are included below: **Policy 4.6-I-13:** Consider shared parking or other alternative parking proposals for residential development based on project-specific parking studies that analyze project need in light of the Zoning Ordinance alternative parking provisions. **Policy 5.6-I-14:** Consider strategies such as shared parking, parking management plans (including valet parking), transit connected satellite parking and/or the construction of public parking facilities in the City Center or other commercial areas to serve projected parking demand, while carefully balancing the need for adequate parking against the desire to minimize traffic growth and create a pedestrian/bicycle friendly environment using Complete Streets design concepts.

Control Measures	Consistency
	Policy 5.6-I-17: Encourage "Park Once" concepts as a vehicle-miles-traveled reduction strategy for mixed-use, commercial, and public facilities through the integration of common design features and shared parking concepts including but not limited to Parking Benefit Districts. **Policy 5.6-I-18:** Encourage shared parking facilities and parking reductions for compatible land uses to minimize excessive parking to reduce inefficient use of land, unnecessary pavement and stormwater runoff, and encourage alternative transportation and reductions in vehicle-miles-traveled.
Energy	
EN1: Decarbonize Electricity Production. Engage with PG&E, municipal electric utilities and community choice energy programs (CCEs) to maximize the amount of renewable energy contributing to the production of electricity within the Bay Area as well as electricity imported into the region. Work with local governments to implement local renewable energy programs. Engage with stakeholders including dairy farms, forest managers, water treatment facilities, food processors, public works agencies and waste management to increase use of biomass in electricity production.	**Consistent.** Guiding policies and policies proposed in the 2040 General Plan would decarbonize electricity production by implementing policies to encourage solar production and use of renewable energy. The following Housing Element, Safety Element, and Air Quality and Greenhouse Gas Element policies encourage decarbonized energy production in San Ramon: **Policy IP 11.5.4-3:** Allow minor variations in building setbacks and/or solar orientation during Plan Review to increase energy efficiency of new housing units. **Policy IP 11.5.4-5:** Encourage innovative designs to maximize passive energy efficiencies, while retaining compatibility with surrounding neighborhoods. **Policy 9.6-I-2:** Explore options to support community-wide installation of self-sufficient energy systems, such as microgrids, at critical facilities and other critical emergency service facilities to minimize service disruptions during power outages. **Policy 12.8-I-1:** Work with developers and homeowners to utilize high efficiency all-electric appliances and equipment in new and existing development projects within the city through implementation of on-going State building code standards. **Policy 12.8-I-2:** Encourage resident and business participation in Marin Clean Energy (MCE), as a regional not-for-profit renewable electricity provider. **Policy 12.8-I-4:** Sustain on-going efforts with utility providers, developers, and local water agencies to promote and encourage voluntary rebate programs that utilize efficient building designs and energy saving equipment in new and existing development projects within the city. **Policy 12.8-I-7:** Work with local conservation organizations, local contractors and developers, and the building industry to revise or develop design standards that achieve energy efficiency, weatherization, and carbon neutral buildings relating to solar orientation, using remote sensors that adjust heating, cooling and lighting, cooling building materials, landscaping, use of cool paving surfaces, parking lot shading and other measures oriented towards reducing energy demand in the built environment.

Control Measures	Consistency
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.	**Consistent**: Guiding policies and policies proposed in the 2040 General Plan would support San Ramon's efforts to conserve various resources that would translate to energy conservation, such as improving water and power conservation. Overarching sustainability strategies to decrease energy demand include enforcing the State's energy conservation standards, utilizing drought-tolerant green infrastructure projects, and encouraging the use of recycling materials. The following Housing Element, Safety Element, and Air Quality and Greenhouse Gas Element policies would reduce energy demand in San Ramon: **Policy IP 11.5.4-4:** Enforce the State's energy conservation standards for new residential construction and renovations to existing structures. **Policy 9.6-I-5:** Utilize drought-tolerant green infrastructure projects including street trees and landscaped areas and encourage installation of green roof systems as part of cooling strategies in public and private spaces to help reduce the heat island effect and energy demand during extreme heat events. **Policy 12.8-I-3:** Work with developers during the design review phase to incorporate features to reduce the heat island effect and energy usage by shading buildings, homes, streets, and pedestrian walkways, such as increasing tree and vegetation cover, installing lighter colored building and roofing materials, and using cool pavements. **Policy 12.8-I-6:** Encourage the use of recycled materials for construction and the efforts of the building industry, water and utility districts, and BAAQMD to promote enhanced energy conservation and sustainable building standards for new construction. **Policy 12.8-I-7:** Work with local conservation organizations, local contractors and developers, and the building industry to revise or develop design standards that achieve energy efficiency, weatherization, and carbon neutral buildings relating to solar orientation, using remote sensors that adjust heating, cooling and lighting, cooling building materials, landscaping, use of cool paving surfaces, parking lot shading and other measures oriented towards reducing energy demand in the built environment.
Buildings	
BL1: Green Buildings. Collaborate with partners such as KyotoUSA to identify energy-related improvements and opportunities for on-site renewable energy systems in school districts; investigate funding strategies to implement upgrades. Identify barriers to effective local implementation of the CALGreen (Title 24) statewide building energy code; develop solutions to improve implementation/enforcement. Work with ABAG's BayREN program to make additional funding available for energy-related projects in the buildings sector. Engage with additional partners to target reducing emissions from specific types of buildings.	**Consistent**: Implementation of the proposed 2040 General Plan policies would promote green building standards. In addition, future development envisioned under the 2040 General Plan would be required to comply with energy standards of Title 24 that are in effect at the time of construction. The following Air Quality and Greenhouse Gas Element policies would promote green building standards in San Ramon: **Policy 12.8-I-2:** Encourage resident and business participation in Marin Clean Energy (MCE), as a regional not-for-profit renewable electricity provider. **Policy 12.8-I-6:** Encourage the use of recycled materials for construction and the efforts of the building industry, water and utility districts, and BAAQMD to promote enhanced energy conservation and sustainable building standards for new construction. **Policy 12.8-I-7:** Work with local conservation organizations, local contractors and developers, and the building industry to revise or develop design standards that achieve energy efficiency,

Control Measures	Consistency
	weatherization, and carbon neutral buildings relating to solar orientation, using remote sensors that adjust heating, cooling and lighting, cooling building materials, landscaping, use of cool paving surfaces, parking lot shading and other measures oriented towards reducing energy demand in the built environment.
BL2: Decarbonize Buildings. Explore potential Air District rulemaking options regarding the sale of fossil fuel-based space and water heating systems for both residential and commercial use. Explore incentives for property owners to replace their furnace, water heater or natural-gas powered appliances with zero-carbon alternatives. Update Air District guidance documents to recommend that commercial and multi-family developments install ground source heat pumps and solar hot water heaters.	**Consistent.** The 2040 General Plan proposes the following Housing Element and Air Quality and Greenhouse Gas Element policies to support the decarbonization of buildings in San Ramon: **Policy IP 11.5.4-3:** Allow minor variations in building setbacks and/or solar orientation during Plan Review to increase energy efficiency of new housing units. **Policy 12.8-I-1:** Work with developers and homeowners to utilize high efficiency all-electric appliances and equipment in new and existing development projects within the city through implementation of on-going State building code standards. **Policy 12.8-I-4:** Sustain on-going efforts with utility providers, developers, and local water agencies to promote and encourage voluntary rebate programs that utilize efficient building designs and energy saving equipment in new and existing development projects within the city. **Policy 12.8-I-7:** Work with local conservation organizations, local contractors and developers, and the building industry to revise or develop design standards that achieve energy efficiency, weatherization, and carbon neutral buildings relating to solar orientation, using remote sensors that adjust heating, cooling and lighting, cooling building materials, landscaping, use of cool paving surfaces, parking lot shading and other measures oriented towards reducing energy demand in the built environment.
Waste Management Control Measures	
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	**Consistent.** Proposed 2040 General Plan Guiding Policy 7.5-G-1 in the Public Facilities and Utilities Element includes specific policies to reduce the generation of solid waste and improve recycling capabilities in San Ramon. Public Facilities and Utilities Element and Air Quality and Greenhouse Gas Element policies include: **Policy 7.5-I-2.** Provide and promote opportunities to reduce waste in all sectors of San Ramon, including residential, commercial, non-profit, government, and educational sectors. **Policy 7.5-I-3.** Develop consumer friendly, convenient, affordable options for community-serving recycling services. **Policy 7.5-I-5.** Comply with State requirements for proper handling and storage of solid waste, recyclables, and hazardous materials, diversion of solid waste from landfills, and provision of programs to make these activities feasible. **Policy 7.5-I-8.** Require solid waste diversion (e.g. waste prevention, reuse, recycling, and composting). **Policy 12.8-I-6.** Encourage the use of recycled materials for construction and the efforts of the building industry, water and utility districts, and BAAQMD to promote enhanced energy conservation and sustainable building standards for new construction.

Control Measures	Consistency
	Policy 12.8-I-8. Encourage use of materials developed with recycled materials as well as recycling and composting in order to reduce materials being sent to landfills. **Policy 12.8-I-9.** Provide recycling programs to directly accept or connect construction companies with those who accept construction and demolition debris, and provide resources on where recycled materials can be procured for local use.
Water Control Measures	
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.	**Consistent**: Guiding policiess and policies proposed in the 2040 General Plan would support San Ramon's efforts to conserve water. Guiding Policy 8.6-G-1 in the Open Space and Conservation Element is focused on implementing water quality and water conservation programs and measures. The following Safety Element, Open Space and Conservation Element, and Air Quality and Greenhouse Gas Element policies would support water conservation in San Ramon: **Policy 9.6-I-3.** Provide educational materials (e.g., websites, social media) and programs to support water conservation efforts that take into account extended drought conditions. **Policy 9.6-I-6.** Prioritize regional solutions with public and private partners, including EBMUD and DSRSD, to diversify the City's water supply through utilizing alternative sources, including recycled water. **Policy 8.6-I-1.** Require new development projects to implement indoor water conservation and demand management measures consistent with building code standards and Climate Action Plan policies. **Policy 8.6-I-2.** Require new development projects to implement outdoor water conservation and demand management measures. **Policy 8.6-I-4.** Require new development to meet the State Model Water Efficient Landscape Ordinance (MWELO). **Policy 8.6-I-5.** Collaborate with DERWA (Dublin San Ramon Services District and East Bay Municipal Utilities District Recycled Water Authorities) to expand the recycled water distribution system in an efficient and timely manner. **Policy 12.4-I-6.** Educate residents on the linkage between land use , transportation, and their impacts on water, energy use, and air pollution. Efforts should include educational materials through variety of effective and engaging platforms and venues. **Policy 12-8-I-5.** Encourage responsible development standards that, where reasonably available, use reclaimed water and non-potable water sources for particulate matter control, including landscaping and construction activities such as fugitive dust control. The development standards shall require new development areas that will be foreseeably served with recycled water to be plumbed with a "purple pipe" system to facilitate the future use of recycled water for landscape irrigation.

Note: Only control measures that are applicable to the proposed plan are identified.

As indicated in Table 3.2-6, the 2040 General Plan would be consistent with the three criteria for evaluating consistency with the 2017 Clean Air Plan. As such, the 2040 General Plan would not conflict with or obstruct implementation of the applicable air quality plan. Therefore, the impact related to air quality management plan consistency would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

Less than significant without mitigation

Criteria Air Pollutants Emissions Compared to Air Quality Standards

Significance Criterion b:	Would the proposed plan result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard?

Impact AQ-2 IMPLEMENTATION OF THE 2040 GENERAL PLAN WOULD RESULT IN THE GENERATION OF AIR POLLUTANTS DURING CONSTRUCTION OF INDIVIDUAL PROJECTS, WHICH COULD AFFECT LOCAL AIR QUALITY. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION. IMPLEMENTATION OF THE PROPOSED PLAN WOULD NOT RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF OPERATIONAL CRITERIA POLLUTANTS WITH MITIGATION.

Construction

Development facilitated by the 2040 General Plan would involve activities that result in air pollutant emissions. Specifically, construction activities such as demolition, grading, construction worker travel, delivery and hauling of construction supplies and debris, and fuel combustion by on-site construction equipment would generate pollutant emissions. These construction activities would create emissions of dust, fumes, equipment exhaust, and other air contaminants, particularly during site preparation and grading. The extent of daily emissions, particularly ROGs and NO_X emissions, generated by construction equipment, would depend on the quantity of equipment used and the hours of operation for each project. The extent of $PM_{2.5}$ and PM_{10} emissions would depend upon the following factors: 1) the amount of disturbed soils; 2) the length of disturbance time; 3) whether existing structures are demolished; 4) whether excavation is involved; and 5) whether transporting excavated materials offsite is necessary. Dust emissions can lead to both nuisance and health impacts. $PM_{2.5}$ is the greatest pollutant of concern during construction. The SFBAAB is designated as nonattainment for the State ozone, PM_{10}, and $PM_{2.5}$ standards, nonattainment for the national ozone and $PM_{2.5}$ standards, and unclassified for the national PM_{10} standard.

The BAAQMD 2022 *CEQA Air Quality Guidelines* have no plan-level significance thresholds for construction air pollutant emissions that would apply to the 2040 General Plan. However, the guidelines include project-level thresholds for construction emissions. If an individual project's construction emissions fall below the project-level thresholds, the project's impacts on regional air quality would be individually and cumulatively less than significant. The BAAQMD has also identified best management practices for construction-related fugitive dust emission. These Basic Construction Mitigation Measures are recommended for all projects. In addition, the BAAQMD and CARB have regulations that address the handling of hazardous air pollutants such as lead and asbestos, which could be aerially disbursed during demolition activities. BAAQMD rules and regulations address both the handling and transport of these contaminants. Construction of development envisioned under the project would temporarily increase air pollutant emissions, possibly creating localized areas of unhealthy air pollution concentrations or air quality nuisances.

The 2040 General Plan Air Quality and Greenhouse Gas Element promotes clean air quality to protect public health and safety and to mitigate adverse air quality impacts. The Air Quality and Greenhouse Gas Element includes Guiding Policies 12.4-G-1 and 12.5-G-1, which support implementation of feasible measures to meet air quality standards and reduce construction emissions associated with buildout of the 2040 General Plan. These goals and associated relevant policies are listed below.

Guiding Policy 12.4-G-1: Work with the California Air Resources Board and the Bay Area Air Quality Management District to improve air quality in the region and San Ramon to meet State and federal ambient air quality standards.

Policy 12.4-I-1 Comply with standards set by local and regional agencies to achieve and maintain air quality standards that are consistent with State law.

Policy 12.4-I-3 Utilize the CEQA process for applicable regulatory guidance; such as the BAAQMD's CEQA Air Quality Guidelines to disclose potential air quality and climate change impacts from discretionary projects under City review.

Guiding Policy 12.6-G-1: Utilize CEQA review and conditions of approval at the plan and project level to implement the Bay Area Air Quality Management District toxic air quality contaminant exposure criteria to minimize public exposure to hazardous air pollutants that impact public health.

Policy 12.6-I-3 Require construction and grading activities to include particulate emissions reduction measures in their Grading Manual Standards to limit fugitive dust and particulate pollution related to equipment.

Policy 12.6-I-5 Comply with BAAQMD CEQA guidance and thresholds as part of conditions of approval and CEQA review for plans and projects.

The 2040 General Plan Policy 12.4-I-1 promotes compliance with standards set by local and regional agencies to achieve and maintain air quality standards. Policy 12.4-I-3 promotes utilizing the CEQA process for applicable regulatory guidance, such as using the BAAQMD CEQA Air Quality Guidelines to disclose potential air quality impacts from discretionary projects. Policy 12.6-I-3 requires construction and grading activities to include particulate emissions reduction measures to limit fugitive dust and particulate pollution related to operation of construction equipment, and Policy 12.6-I-5 requires compliance with BAAQMD CEQA guidance and thresholds as part of conditions of approval for plans and projects. Implementation of these policies would reduce construction criteria pollutant emissions, especially those for which the region is in non-attainment, generated by future projects facilitated by the 2040 General Plan.

CONSTRUCTION FUGITIVE DUST

Implementation of Policy 12.6-I-3 would require construction and grading activities to limit fugitive dust and particulate pollution related to construction equipment by including particulate emissions reduction measures in Grading Manual Standards for future development projects facilitated by the 2040 General Plan. Implementation of Policy 12.6-I-5 would require plans and projects to comply with BAAQMD CEQA guidance and thresholds as part of conditions of approval and CEQA review, which would include basic best management practices for construction-related fugitive dust (see BAAQMD CEQA Guidelines, Table 5-2) emissions in accordance with BAAQMD standards. BAAQMD basic best management practices for construction-related fugitive dust emissions would require

watering exposed surfaces twice a day, covering all haul trucks transporting loose materials, removing visible mud or dirt track-out once a day, limiting vehicle speeds on unpaved roads to 15 miles per hour, completing paving as soon as possible, suspending all excavation, grading, and/or demolition activities when average wind speeds exceed 20 miles per hour, washing all trucks and equipment, including their tires, prior to leaving the site, treating unpaved roads located 100 feet or further from a paved road with a 6- to 12-inch compacted layer, and posting publicly visible signs with contact information for dust complaints. With adherence to these 2040 General Plan policies listed above, cumulative construction criteria pollutant impacts related to fugitive dust and consistency with associated air quality standards would be less than significant. Construction sites located near schools, residential areas, or other sensitive land uses are encouraged to implement enhanced best management practices for construction-related fugitive dust emissions. BAAQMD enhanced best management practices for construction-related fugitive dust emissions include limiting the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities, installing wind breaks on the windward side(s) of actively disturbed areas of construction, planting vegetative ground cover in disturbed areas, installing sandbags or other erosion control measures on sites with a slope greater than one percent, minimizing the amount of excavated material or waste material stored at the site, and hydroseeding or applying non-toxic soil stabilizers to construction areas that are inactive for at least 10 calendar days.

OTHER CONSTRUCTION AIR POLLUTANT EMISSIONS

BAAQMD identifies screening sizes of development projects in the BAAQMD CEQA Guidelines that apply to development projects in San Ramon and throughout BAAQMD's jurisdiction. Development projects that are below the screening size are assumed to have less-than-significant impacts. Development projects that are larger than the screening size are required to demonstrate that the construction phase of the project would not exceed the BAAQMD thresholds of significance, as identified in the BAAQMD CEQA Guidelines. For a project to have a less-than-significant criteria air pollutant impact, it must implement all of BAAQMD's basic best management practices (e.g., see BAAQMD CEQA Guidelines, Table 5-2). Therefore, without the preparation of project-specific analysis on a project-by-project basis for development proposals that exceed the BAAQMD screening sizes, construction criteria pollutant emission impacts at the program level are potentially significant. However, implementation of Mitigation Measure AQ-1, described below, would require that projects that exceed the BAAQMD screening sizes to evaluate project-specific construction emissions in conformance with the BAAQMD methodology and to mitigate the impacts to a less-than-significant level if construction-related criteria air pollutants exceed the BAAQMD thresholds of significance. Further, construction sites in the vicinity of schools, residential areas, and other sensitive land uses would be required to implement enhanced best management practices (e.g., see BAAQMD CEQA Guidelines, Table 5-3) to reduce construction air pollutant emissions. Therefore, 2040 General Plan cumulative construction criteria pollutant impacts related to air pollutant emissions and consistency with associated air quality standards would be less than significant with mitigation.

OVERALL

With implementation of Mitigation Measure AQ-1, overall cumulative construction criteria pollutant emission impacts and consistency with associated air quality standards would be less than significant with mitigation.

Operation

The greatest source of criteria pollutants in San Ramon is and would continue to be from transportation sources, specifically mobile emissions from roadway vehicle volumes. In addition, natural gas usage and area sources (e.g., landscaping and other mechanical equipment and ROG emissions from paint) also contribute to criteria air pollutant emissions in San Ramon. The 2040 General Plan emphasizes reducing VMT on area roadways through emphasizing greater residential density and implementation of alternative modes of transportation. The 2040 General Plan Land Use Element, Housing Element, Traffic and Circulation Element, Air Quality and Greenhouse Gas Element, Growth Management Element, and Economic Element policies that support a VMT reduction and, thus, a reduction in mobile criteria pollutant emissions, are listed below:

LAND USE ELEMENT

Guiding Policy 4.6-G-I-1: Foster a pattern of development that enhances the existing character of the City, and encourages land use concepts that contribute to the design of the community.

Policy 4.6-I-23 Promote redevelopment with a mix of high-density residential, retail, and other compatible non-retail uses in the Mixed Use General Plan land use designation.

Policy 4.6-I-25 Promote incentives that will provide for density and FAR bonuses for mixed-use development that includes amenities for public benefit, such as workforce housing, pedestrian-oriented facilities (outdoor seating, plazas, weather protection, transit waiting areas), historic preservation, cultural facilities, public art and water features, and open space preservation. Inclusionary housing requirements would apply.

Policy 4.6-I-29 Allow a diverse mix of complementary uses within Bishop Ranch (including locations within CityWalk and North Camino Ramon Specific Plan) to better meet the daily needs of workers and to reduce the need to travel by automobile. Complementary uses shall be consistent with site zoning, compatible with the primary use and shall not adversely affect the traffic-carrying capacity of adjacent streets.

HOUSING ELEMENT

Guiding Policy GP 11.5.1-1: Provide a diversity of housing types and affordability levels within San Ramon to meet the needs of community residents.

Policy IP 11.5.1-2 Develop target density to encourage higher yield of units in all residential and mixed use zones.

Policy IP 11.5.1-26 Encourage infill housing development projects (including senior housing) near employment, shops/services, and transportation corridors, particularly within the City's core and Priority Development Areas.

Guiding Policy GP 11.5.4-1: Promote climate change goals through energy conserving practices in the location, construction, renovation, and maintenance of San Ramon's housing units.

Policy IP 11.5.4-2 Promote a combination of residential, retail, and office uses in areas designated for mixed use to reduce Vehicle Miles Traveled.

TRAFFIC AND CIRCULATION ELEMENT

Guiding Policy 5.2-G-1: Actively participate in local and regional transportation planning.

Policy 5.2-I-7 Pursue regional air quality and greenhouse gas reduction objectives through effective management of the City's transportation system.

Guiding Policy 5.3-G-1: Encourage transportation facilities that consider the users' safety and allow for all modes of travel based on local conditions and needs of the community.

Policy 5.3-I-5 Encourage Complete Streets concepts as a vehicle-miles-traveled and greenhouse gas reduction strategy.

Guiding Policy 5.6-G-1: Utilize Transportation Demand Management (TDM) strategies as an integral component of the City's transportation program to reduce total vehicle trips on San Ramon roadways and reduce the corresponding vehicle emissions that promote regional air quality improvements.

Policy 5.6-I-1 Engage with public agencies and other jurisdictions to promote local and regional public transit service in San Ramon as part of a multimodal and Complete Streets strategy.

Policy 5.6-I-2 Encourage and assist major employers and property managers of commercial sites with 50 or more employees to reduce the number of single-occupant vehicles by participating in the City's TDM programs, including the commuter benefit program, and programs provided by the Bay Area Air Quality Management District.

Policy 5.6-I-3 Encourage additional local bus or other public transportation service providers to and from regional transit lines. The City shall strive to improve the transit service to and from all neighborhoods and commercial districts in San Ramon.

Policy 5.6-I-4 Preserve options for future public transit and alternative transportation uses when designing improvements for roadways such as Bollinger Canyon Road Corridor within Dougherty Valley.

Policy 5.6-I-5 Encourage future transit uses within the I-680 corridor right-of-way and within the City of San Ramon.

Policy 5.6-I-6 Engage with other jurisdictions and agencies to coordinate the City's TDM programs with regional plans and action plans that are aimed at reducing traffic congestion and improving air quality.

Policy 5.6-I-7 Encourage new development to include a mix of uses and Complete Streets concepts that will allow people to walk and bike between destinations and reduce the amount of automobile vehicle-miles-traveled.

Policy 5.6-I-8 Encourage alternative public transportation programs and obtain funding for new TDM projects or programs.

Policy 5.6-I-9 Encourage employers and commercial complexes to emphasize public transit services or private alternatives to the single-occupant vehicle.

Policy 5.6-I-10 Work with transit providers to situate amenity rich transit stops and shelters at convenient and safe locations.

Policy 5.6-I-11 Promote increased transit ridership through the use of Transportation Management Associations and other employer-based transit programs, equip buses with three slot bike racks, and make transit information readily accessible in a smart phone friendly format.

Policy 5.6-I-12 Coordinate with Caltrans and transit providers to identify and implement park and ride lots with updated amenities with convenient access to public transit often called Mobility Hubs.

Policy 5.6-I-13 Work with the San Ramon Valley Unified School District and other appropriate agencies and organizations to reduce vehicle trips through the provision of transit programs, the TRAFFIX School Bus Program and promoting carpooling, bicycling, and walking.

Policy 5.6-I-14 Consider strategies such as shared parking, parking management plans (including valet parking), transit connected satellite parking and/or the construction of public parking facilities in the City Center or other commercial areas to serve projected parking demand, while carefully balancing the need for adequate parking against the desire to minimize traffic growth and create a pedestrian/bicycle friendly environment using Complete Streets design concepts.

Policy 5.6-I-15 Work with local transit providers to increase and expand weekend transit service and late night Owl service from regional rail and transit hubs.

Policy 5.6-I-16 Explore opportunities for the location or relocation of a transit center and/or multiple Mobility Hubs within Bishop Ranch Business Park to better geographically balance the public transit needs for the City.

Guiding Policy 5.6-G-2: Encourage trip reduction measures in an effort to reduce vehicle-miles-traveled, improve air quality, and reduce greenhouse gas emissions.

Policy 5.6-I-17 Encourage “Park Once” concepts as a vehicle-miles-traveled reduction strategy for mixed-use, commercial, and public facilities through the integration of common design features and shared parking concepts including but not limited to Parking Benefit Districts.

Policy 5.6-I-18 Encourage shared parking facilities and parking reductions for compatible land uses to minimize excessive parking to reduce inefficient use of land, unnecessary pavement and stormwater runoff, and encourage alternative transportation and reductions in vehicle-miles-traveled.

Policy 5.6-I-19 Encourage infill, Transit-Oriented Development (TOD) and first and last mile transit access connections as vehicle-miles-traveled reduction strategies for existing and proposed development.

Guiding Policy 5.7-G-1: Encourage bicycling and walking as alternatives to driving, consistent with Complete Streets concepts.

Policy 5.7-I-1 Establish a network of on- and off-street bicycle routes to encourage their use for commute, recreational, and other trips. Improve and expand bicycle routes for commuters in San Ramon and between San Ramon and neighboring cities.

Policy 5.7-I-2 Develop bicycle routes that provide access to regional employment centers, shopping centers, public facilities, transit centers, schools, and parks.

Policy 5.7-I-3 Continue to emphasize the Iron Horse Trail as a major north-south route for non-motorized modes of transportation including walking, biking, rollerblading and scooters by improving connectivity and enhancing amenities for these modes.

Policy 5.7-I-5 Require bicycle parking, storage and other support facilities as part of new office, retail, housing, and public facilities developments.

Policy 5.7-I-6 Continue to promote and implement through the development review process, continuous circulation facilities within commercial districts and residential neighborhoods to enhance connectivity and promote pedestrian and bicycle modes of transportation consistent with Complete Streets concepts.

Policy 5.7-I-8 Pursue grant funding for implementation of projects identified in the adopted Bicycle Master Plan and Walking District Master Plan, including funding from State and regional sources.

Policy 5.7-I-9 Implement roadway improvement projects to minimize both temporary and permanent reductions in bicycle and pedestrian mobility and/or accessibility.

Policy 5.7-I-10 Work with neighboring jurisdictions to ensure that continuity in bicycle and pedestrian networks is provided at jurisdictional boundaries.

Policy 5.7-I-11 Work with Caltrans and other appropriate agencies to improve bicycle and pedestrian mobility at freeway crossings.

Policy 5.7-I-13 Prioritize bicycle network improvements in the core area of San Ramon, including construction of new facilities and actions to remove barriers to cycling as identified in the San Ramon Bicycle Master Plan, in order to support development in the City's Priority Development Areas (PDAs).

AIR QUALITY AND GREENHOUSE GAS ELEMENT

Guiding Policy 12.5-G-1: Reduce greenhouse gas emissions and improve air quality by encouraging development that integrates land use and transportation planning principles through the creation of compact, mixed-use neighborhoods that are bike and pedestrian-friendly.

Policy 12.5-I-2 Support and encourage projects proposing infill, and mixed-use development that create walkable and bicycle friendly neighborhoods and communities that increase access to transit.

Policy 12.5-I-3 Implement the Growth Management program to assess new development project impacts on transit plans and facilities to minimize impacts from greenhouse gases and air pollution.

Policy 12.5-I-4 Consider the City's jobs to housing ratio when approving development applications to reduce VMT to below the significance threshold.

Guiding Policy 12.7-G-1: Reduce greenhouse gas emissions by shifting to multi-modal transportation systems, and zero-emission and low-emission vehicles and car-sharing programs by enhancing existing infrastructure and improving multi-modal infrastructure options.

Policy 12.7-I-1 The City shall encourage participation in feasible, affordable, innovative and flexible employer-based trip reduction programs for employees and encourage employer and resident participation in employer-based trip reduction programs, including, but not limited to the BAAQMD Commuter Benefit Program.

Policy 12.7-I-2 City fleet vehicle managers shall develop and maintain a fiscally sound plan to transition to cleaner fleets with a conversion schedule, where feasible, enacted by an adopted Green Vehicle Procurement Policy.

Policy 12.7-I-3 Work with telecommunications companies to develop state-of-the-art telecommunications infrastructure within the city, including broadband access and neighborhood work centers for telecommuting to reduce vehicular commute travel and related emissions.

Policy 12.7-I-4 Provide information to encourage the use of transportation modes that minimize vehicle miles travelled and the resulting reduction in air pollution and greenhouse gas emissions.

Policy 12.7-I-5 Construct and promote infrastructure and facilities that support and encourages the use of low-emission transportation and alternative modes of travel, including safe and comprehensive bicycle and pedestrian system that connects all parts of the city and development standards that require installation of alternative fuel infrastructure, such as electric vehicle chargers and hydrogen fueling stations.

Policy 12.7-I-6 Invest in low-emission or zero-emission transportation infrastructure through Traffic Demand Management programs and incentivizing trip reduction programs to reduce traffic congestion and harmful pollutants generated from increased traffic and traffic congestion.

GROWTH MANAGEMENT ELEMENT

Guiding Policy 3.3-G-1: Maintain acceptable traffic LOS on City streets and roadways through implementation of Transportation Demand Management (TDM), Growth Management, the Capital Improvement Program, and traffic engineering operational measures.

Policy 3.3-I-6 Support regional and local neighborhood transit options to reduce the use of the automobile and maintain acceptable traffic levels of service.

Guiding Policy 3.3-G-1: Utilize Transportation Demand Management (TDM) strategies as an integral component of the City's transportation program to reduce total vehicle trips on San Ramon roadways and reduce the corresponding vehicle emissions that promote regional air quality improvements.

Policy 3.4-I-1 Continue to implement the City's TDM Program to reduce trip generation.

Policy 3.4-I-2 Work with 511 Contra Costa, other jurisdictions and agencies to coordinate the City's TDM Program with regional TDM programs and activities.

Policy 3.4-I-3 Cooperate with regional and local service providers and other jurisdictions to promote local and regional public transit service.

Policy 3.4-I-4 Support local feeder transit service to and from current and future regional transit lines.

Policy 3.4-I-5 Preserve options for future transit use when designing improvements for roadways.

Policy 3.4-I-6 Locate future transit uses, such as light rail or BART, in the I-680 right-of-way.

Policy 3.4-I-7 Improve and expand the bicycle route network in San Ramon.

Guiding Policy 3.5-G-1: Participate in regional cooperative and multi-jurisdictional transportation planning for the maintenance of regional mobility and air quality standards as required by the Measure J Growth Management Program and the Contra Costa Congestion Management Plan (CMP).

Policy 3.5-I-4 Emphasize regional transportation demand management and trip reduction strategies as alternatives to increased roadway capacity.

Guiding Policy 3.6-G-1: Promote the opportunity to both work and live in San Ramon through implementation of the Housing Element.

Policy 3.6-I-4 As part of the development review process, support the accommodation of public transit, bicycle, and pedestrian access for new development.

ECONOMIC ELEMENT

Guiding Policy 2.3-G-1: Foster a climate in which businesses can prosper

Policy 2.3-I-6 Encourage housing on infill sites in the City's two PDAs (City Center and North Camino Ramon), where flat terrain and proximity to employment, shops and services favors walking, bicycling and travel by other modes than single-occupant vehicle.

Guiding Policy 2.3-G-2: Provide adequate land use designations to accommodate planned development, with business and commercial areas complementing residential and public development in location/access, mix of uses, attractiveness, and environmental quality.

Policy 2.3-I-13 Promote and encourage public transit, carpool and vanpool opportunities into San Ramon's business areas.

Policy 2.3-I-14 Encourage and facilitate non-motorized means of transportation to business areas.

Policy 2.3-I-18 Encourage businesses to promote the use of commute alternatives among their employees by implementing the City's Transportation Demand Management (TDM) programs.

According to the BAAQMD 2022 *CEQA Air Quality Guidelines,* the threshold for criteria air pollutants and precursors at the plan level requires an assessment of the rate of increase of plan VMT and population. Table 3.2-7 summarizes the net increase in population versus VMT for 2040 General Plan buildout. The proposed plan is projected to accommodate a population of 110,089 persons by the year 2040, which is an increase of 26,269 persons or 31 percent compared to baseline conditions (83,820 persons). The proposed plan would generate an estimated daily VMT of 5,313,500 miles in the year 2040, which is an increase of 821,600 miles or 18 percent compared to existing (2022) conditions (4,491,900 miles).

Table 3.2-7 Net Increase in 2040 General Plan Population versus VMT

Scenario	Existing (2022)	2040 General Plan Buildout	Net Increase
Population	83,820	110,089	26,269
Percentage change			31%
VMT	4,491,900	5,313,500	821,600
Percentage change			18%

Source: Fehr & Peers 2023

The 2040 General Plan emphasizes changing land uses to concentrate growth and residences near jobs and services to reduce singular vehicle trips and encourage alternative models of travel. As shown in Table 3.2-7 above, San Ramon's population increase would be proportionately greater than the VMT increase. As such, development facilitated by the 2040 General Plan would result in an increase in VMT that is less than the increase in service population. As discussed under *Specific Thresholds of Significance* above, if a plan's VMT increase is less than or equal to the plan's projected population increase, impacts related to operational criteria pollutant emissions would be less than significant. Nonetheless, individual development projects under the plan could generate potentially significant operational criteria air pollutants unless analyzed and mitigated. However, implementation of Mitigation Measure AQ-2, described below, requires projects that exceed the BAAQMD screening sizes to evaluate project-specific operation emissions and to mitigate impacts to a less-than-significant level if operational-related air pollutants exceed the BAAQMD-adopted thresholds of significance. Therefore, 2040 General Plan cumulative operational criteria pollutant impacts related to air pollutant emissions and consistency with associated air quality standards would be less than significant with mitigation.

Mitigation Measures

MITIGATION MEASURE AQ-1: REDUCE CONSTRUCTION CRITERIA POLLUTANT EMISSIONS

To reduce temporary increases in criteria air pollutant emissions during the construction phase for discretionary development projects that are subject to CEQA and exceed the screening sizes in the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines, the City shall require such

projects to evaluate project- specific construction emissions in conformance with the BAAQMD methodology. If construction-related criteria air pollutants exceed the BAAQMD thresholds of significance, the project applicant shall mitigate the impacts to a less-than-significant level.

MITIGATION MEASURE AQ-2: REDUCE OPERATIONAL CRITERIA POLLUTANT EMISSIONS

To reduce long-term increases in air pollutants during the operation phase for discretionary development projects that are subject to CEQA and exceed the screening sizes in the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines, the City shall require such projects to evaluate project- specific operation emissions in conformance with BAAQMD CEQA Guidelines. If operation- related air pollutants exceed the BAAQMD-adopted thresholds of significance, the project applicant shall mitigate the impact to a less-than-significant level.

Level of Significance

Less than significant with mitigation

Toxic Air Contaminants Emissions Exposure

Significance Criterion c:	Would the proposed plan expose sensitive receptors to substantial pollutant concentrations?

Impact AQ-3 CONSTRUCTION ACTIVITIES FOR INDIVIDUAL PROJECTS FACILITATED BY THE 2040 GENERAL PLAN LASTING LONGER THAN TWO MONTHS OR LOCATED WITHIN 1,000 FEET OF SENSITIVE RECEPTORS COULD EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS. IMPLEMENTATION OF THE PROPOSED PLAN MAY ALSO EXPOSE SENSITIVE RECEPTORS TO ADDITIONAL OPERATIONAL SOURCES OF TACS. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Construction

Development facilitated by the 2040 General Plan would result in DPM exhaust emissions from off-road, heavy-duty diesel equipment associated with site preparation (e.g., excavation, grading, clearing), building construction, and other miscellaneous construction activities. DPM was identified as a TAC by CARB in 1998. The potential cancer risk from the inhalation of DPM, as discussed below, outweighs the potential non-cancer[11] health impacts.[12] Generation of DPM from construction typically occurs in a single area for a short period of time. Construction of development facilitated by the 2040 General Plan would occur over approximately 17 years but use of diesel-powered construction equipment in any one area would likely occur for no more than a few years for an individual project and would cease when construction is completed in that area. It is not possible to quantify risk without identified specific project details and locations, as impacts would vary based on location, intensity, construction methods, and other project-specific factors. For example, a project proposing construction of a small-scale commercial building on an infill site over a six-month construction period would generally have less impacts than a large-scale commercial development on an undeveloped site with a two-year constriction period.

The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the

[11] Non-cancer risks include premature death, hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma, increased respiratory symptoms, and decreased lung function (CARB 2022).
[12] CARB. 2022b. Overview: Diesel Exhaust & Health. https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health (accessed April 2023).

extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period. According to the California Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period for population-wide impacts; however, such assessments should be limited to the period/duration of activities associated with the development.[13] BAAQMD uses an exposure period of 30 years.[14]

The maximum PM_{10} and $PM_{2.5}$ emissions would occur during demolition, site preparation and grading activities, which would only occur for a portion of the overall construction duration. PM_{10} and $PM_{2.5}$ emissions would decrease for the remaining construction period because construction activities such as building construction and architectural coating would require less intensive construction equipment. The 2040 General Plan contains the following Air Quality and Greenhouse Gas Element policies that would have the effect of minimizing construction TACs from future projects facilitated by the 2040 General Plan:

Guiding Policy 12.6-G-1: Utilize CEQA review and conditions of approval at the plan and project level to implement the Bay Area Air Quality Management District toxic air quality contaminant exposure criteria to minimize public exposure to hazardous air pollutants that impact public health.

Policy 12.6-G-3 Require construction and grading activities to include particulate emissions reduction measures in their Grading Manual Standards to limit fugitive dust and particulate pollution related to equipment.

Policy 12.6-G-5 Comply with BAAQMD CEQA guidance and thresholds as part of conditions of approval and CEQA review for plans and projects.

Future projects facilitated by the 2040 General Plan would also be required to be consistent with the applicable 2017 Clean Air Plan, BAAQMD regulatory requirements and control strategies, and the CARB In-Use Off-Road Diesel Vehicle Regulation, which are intended to reduce emissions from construction equipment and activities. Additionally, future development facilitated by the 2040 General Plan would be required to comply with Mitigation Measure AQ-1 requiring implementation of construction emission measures that would also reduce construction-related TACs. According to the OEHHA, construction of individual projects lasting longer than two months or placed within 1,000 feet of sensitive receptors could potentially expose nearby sensitive receptors to substantial pollutant concentrations. In addition, these future projects could exceed BAAQMD thresholds of an increased cancer risk of greater than 10.0 in a million and an increased non-cancer risk of greater than 1.0 Hazard Index (Chronic or Acute). As such, construction impacts from TAC emissions would be potentially significant. However, implementation of Mitigation Measure AQ-3 would require coordination with the City to determine if a construction HRA would need to be performed for future projects with construction timelines greater than two months and within 1,000 feet of sensitive receptors, in order to identify and reduce potential risk exposure to nearby sensitive

[13] OEHHA. 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0 (accessed March 2023).

[14] BAAQMD. 2016. Air Toxics NSR Program Health Risk Assessment Guidelines. December. https://www.baaqmd.gov/~/media/files/planning-and-research/permit-modeling/hra_guidelines_12_7_2016_clean-pdf.pdf?la=en (accessed March 2023).

receptors. Therefore, construction-related TACs exposure impacts would be less than significant with mitigation.

Operation

Development facilitated by the 2040 General Plan could accommodate a net increase of approximately 10,155 residential units and up to 347,339 net new non-residential gross square feet. Development facilitated by the 2040 General Plan in accordance with land use and zoning regulations would not site land uses that typically generate TAC, such as industrial land uses, in close proximity to residential land uses. Additionally, if the proposed commercial and mixed uses site a new stationary TAC source, like an emergency generator, then said stationary source would be required to receive a permit from BAAQMD. The permitting process would ensure that the stationary source does not present a health risk to existing nearby sensitive receptors.

To minimize health risks to sensitive receptors near stationary sources and/or freeways and high-volume roadways, the 2040 General Plan Air Quality and Greenhouse Gas Element includes the following policies, listed below, which support the implementation of feasible policies to reduce TAC emissions associated with buildout of the 2040 General Plan.

Guiding Policy 12.5-G-1: Reduce greenhouse gas emissions and improve air quality by encouraging development that integrates land use and transportation planning principles through the creation of compact, mixed-use neighborhoods that are bike and pedestrian-friendly.

Policy 12.5-I-1 Minimize air pollution through project review, CEQA evaluation, and conditions of approval that are consistent with CAP GHG emissions targets and BAAQMD toxic air quality contaminant exposure thresholds.

Guiding Policy 12.6-G-1: Utilize CEQA review and conditions of approval at the plan and project level to implement the Bay Area Air Quality Management District toxic air quality contaminant exposure criteria to minimize public exposure to hazardous air pollutants that impact public health.

Policy 12.6-I-1 In accordance with BAAQMD Air Quality Guidelines, locate sources of hazardous emissions at appropriate distances from existing and planned sensitive land uses to minimize or avoid potential health risks to people that might result from hazardous air pollutant emissions.

Policy 12.6-I-2 Evaluate potential handling, storage, and transport of hazardous materials in new commercial and industrial developments to minimize public exposure to hazardous air pollutants.

The primary mobile source of TACs within the plan area is truck idling and use of off-road equipment. New warehousing operations could generate substantial DPM emissions from off-road equipment use and truck idling. In addition, some warehousing and industrial facilities may include use of transport refrigeration units (TRUs) for cold storage. Such potential future uses could generate an increase in DPM that would contribute to cancer and noncancer health risks at nearby sensitive receptors. Without project-specific analysis, health risk impacts from nonpermitted sources associated with development of industrial and commercial land uses under the proposed plan are considered potentially significant. However, with implementation of Mitigation Measure AQ-4 that requires new applicants for land uses that would generate substantial diesel truck travel to determine the appropriate level of operational health risk assessment required, operational 2040 General Plan impacts related to TAC emissions would be less than significant with mitigation.

Mitigation Measures

MITIGATION MEASURE AQ-3: CONDUCT AND IMPLEMENT CONSTRUCTION HEALTH RISK ASSESSMENT

To identify and reduce potential risk exposure to nearby sensitive receivers during construction of individual projects (excluding ADUs, single-family residences, and duplexes) where construction activities would a) occur within 1,000 feet of sensitive receptors, b) last longer than two months, and c) not utilize equipment rated US EPA Tier 4 for equipment of 50 horsepower or more, construction equipment fitted with Level 3 Diesel Particulate Filters for all equipment of 50 horsepower or more, and/or alternative fuel construction equipment, the project applicant shall coordinate with the City to determine if a construction health risk assessment (HRA) shall be performed. If an HRA is to be performed, the HRA shall determine potential risk and compare the risk to the following BAAQMD thresholds:

- Non-compliance with Qualified Community Risk Reduction Plan;
- Increased cancer risk of > 10.0 in a million;
- Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute); or
- Ambient $PM_{2.5}$ increase of > 0.3 $\mu g/m^3$ annual average

If risk exceeds the thresholds, measures such as requiring the use of Tier 4 engines, Level 3 Diesel Particulate Filters, and/or alternative fuel construction equipment shall be incorporated to reduce the exposure risk to acceptable levels.

MITIGATION MEASURE AQ-4: REDUCE OPERATIONAL TOXIC AIR CONTAMINANTS

To identify and reduce potential risk exposure to nearby sensitive receivers during the operation phase for discretionary development projects that are subject to CEQA and exceed the screening sizes in the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines, the City shall require applicants for commercial land uses that would generate substantial diesel truck travel (i.e., 100 diesel trucks per day or 40 or more trucks with diesel-powered transport refrigeration units per day) to contact BAAQMD to determine the appropriate level of operational health risk assessment (HRA) required. If required, the operational HRA shall be prepared in accordance with the Office of Environmental Health Hazard Assessment and BAAQMD requirements and include mitigation to reduce the exposure risk to an acceptable level. Typical measures to reduce risk impacts may include, but are not limited to:

a. Restricting idling on-site beyond Air Toxic Control Measures idling restrictions, as feasible.
b. Electrifying warehousing docks.
c. Truck Electric Vehicle (EV) Capable trailer spaces.
d. Requiring use of newer equipment and/or vehicles.
e. Restricting off-site truck travel through the creation of truck routes.

Level of Significance

Less than significant with mitigation

Objectionable Odors

Significance Criterion d:	Would the proposed plan result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impact AQ-4 THE 2040 GENERAL PLAN COULD CREATE OBJECTIONABLE ODORS THAT COULD ADVERSELY AFFECT A SUBSTANTIAL NUMBER OF PEOPLE. IMPACTS RELATED TO ODORS WOULD BE LESS THAN SIGNIFICANT.

Construction

Implementation of the 2040 General Plan would generate oil and diesel fuel odors during construction from equipment use as well as odors related to asphalt paving. The odors would be limited to the construction period and would be temporary. Therefore, odors emitted from the construction of individual future projects under the 2040 General Plan would be less than significant.

Operation

As stated in the BAAQMD *CEQA Guidelines,* land uses typically producing objectionable odors include agricultural uses, wastewater treatment plants, food manufacturing plants, chemical plants, composting, refineries, landfills, and confined animal facilities. Development facilitated by the 2040 General Plan would include residential, commercial, public, and open space uses. These land uses typically do not produce objectionable odors. In addition, it is not anticipated that the 2040 General Plan would add land uses that would have the potential to expose sensitive receptors, such as residences, to odors. However, certain commercial uses would have the potential to generate nuisance odors. Other odors from development of the 2040 General Plan include odor emissions that would be limited to odors associated with vehicle and engine exhaust and idling; however, odors from vehicles are not stationary and are dispersed throughout the roadway network. Therefore, individual projects under the plan could generate potentially significant objectionable odors unless analyzed and mitigated. However, consistency with San Ramon Zoning Ordinance D3-8(L):

> *Odor. No activity, process, or use shall produce obnoxious or objectionable odors or fumes that are perceptible without instruments by a reasonable person at the property line of the subject site.*

would reduce potential impacts related to odors to less than significant. Therefore, 2040 General Plan impacts related to operational odor impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

3.2.5 Cumulative Impacts

The geographic scope of the cumulative air quality analysis is the regional air basin, specifically the SFBAAB. The cumulative analysis considers the nearby past, present, and reasonably foreseeable future plans and projects listed in Table 3-1 (refer to Chapter 3, *Environmental Impact Analysis*) located in San Ramon, Danville, and unincorporated Contra Costa County in addition to the proposed plan.

Criteria Air Pollutants

The SFBAAB is in non-attainment for federal standards of ozone and $PM_{2.5}$ and in non-attainment for the State standard for ozone, $PM_{2.5}$, and PM_{10}. The SFBAAB is in attainment of all other federal and State standards. Development facilitated by the 2040 General Plan would generate particulate matter and the ozone precursors (ROG and NO_X) in the area during construction and operation. As described under Impact AQ-1, the 2040 General Plan would be consistent with the overall goal of the 2017 Clean Air Plan control measures as development would comply with the latest Title 24 regulations and would increase density in urban areas in proximity to transit, allowing for greater use of alternative modes of transportation. Development facilitated by the 2040 General Plan does not contain elements that would disrupt or hinder implementation of any 2017 Clean Air Plan control measures. In addition, the 2040 General Plan would support the primary goals of the 2017 Clean Air Plan. Discussion of these impacts considers the cumulative nature of criteria pollutants in the region. Therefore, the 2040 General Plan would not result in a cumulatively considerable contribution to a conflict with or obstruction of implementation of the applicable air quality plan.

As described under Impact AQ-2, 2040 General Plan construction would temporarily increase air pollutant emissions, possibly creating localized areas of unhealthy air pollution levels or air quality nuisances. BAAQMD has identified feasible fugitive dust control measures for construction activities because fugitive PM_{10} and $PM_{2.5}$ are of concern. These temporary impacts would be mitigated with Mitigation Measure AQ-1. Implementation of Mitigation Measure AQ-2 would ensure that individual projects as part of plan buildout do not exceed BAQQMD's operational criteria pollutant thresholds. Discussion of these impacts considers the cumulative nature of criteria pollutants in the region; therefore, with mitigation, the project would not result in a cumulatively considerable net increase of a criteria pollutant from construction emissions.

In addition, as described under Impact AQ-2, the 2040 General Plan would result in an increase of operational VMT that would not proportionately exceed the projected population increase per the BAAQMD CEQA Air Quality Guidelines for operational emissions from plans. Therefore, impacts from operational criteria pollutant impacts from the 2040 General Plan would be less than significant and the 2040 General Plan's operational criteria pollutant emissions would not be cumulatively considerable.

Therefore, the overall cumulative impact related to criteria air pollutants would be less than significant.

Toxic Air Contaminants

As identified under Impact AQ-3, 2040 General Plan development would not have a significant impact from TACs with implementation of 2040 General Plan policies and Mitigation Measures AQ-3 and AQ-4. As discussed under Specific Thresholds of Significance, a project would have a cumulatively considerably impact associated with health risks from TAC and $PM_{2.5}$ emissions if the aggregate total emissions of all past, present, and foreseeable future sources within a 1,000-foot

radius of the property line of the source plus the project's contribution exceed 100 in a million or the BAAQMD non-cancer risk thresholds. As identified under Impact AQ-3, individual development under the 2040 General Plan would not have a significant impact from TACs with implementation of 2040 General Plan policies and Mitigation Measures AQ-3 and AQ-4. While implementation of the 2040 General Plan and in conjunction with the other cumulative projects would generate TACs that could contribute to elevated risk levels in San Ramon, individual projects would achieve the project-level risk threshold of 10 per million with mitigation,. Therefore, the 2040 General Plan's cumulative contribution to health risk is conservatively less than significant with mitigation.

Odors

As identified under Impact AQ-4, development facilitated by the 2040 General Plan would not have a significant impact from odor emissions with implementation of Mitigation Measure AQ-5. Construction emissions would disperse rapidly with distance, and therefore construction projects in proximity to one another would not result in combined odors above those analyzed. In addition, development facilitated by the 2040 General Plan is not anticipated to contain uses known to result in objectionable odors and therefore cumulative odor impacts from multiple developments would not result in a cumulatively considerable increase in odors. Therefore, the cumulative impact related to odors would be less than significant.

Overall Level of Cumulative Significance

Less than significant with mitigation

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3.3 Biological, Agriculture, and Forestry Resources

3.3.1 Introduction

This section describes existing biological, agricultural, and forestry resources in the General Plan area as well as the relevant regulatory framework. This section also evaluates possible direct and indirect impacts to biological resources, including special-status species, sensitive natural communities, regulated waters and wetlands, sensitive habitat and mature native trees, and wildlife movement corridors associated with implementation of the proposed plan. This section also addresses and evaluates potential impacts related to agricultural and forestry resources. Information included in this section is based on online record searches of the following databases: the California Department of Fish and Wildlife (CDFW) *California Natural Diversity Database* (CNDDB),[1] the California Native Plant Society (CNPS) *Online Inventory of Rare, Threatened and Endangered Plants of California,*[2] the U.S. Fish and Wildlife Service (USFWS) *National Wetlands Inventory* (NWI),[3] USFWS *Critical Habitat Mapper,*[4] and USFWS *Information, Planning, and Conservation System* (IPaC).[5]

3.3.2 Environmental Setting

Vegetation Communities and Other Land Cover Types

Definitions

Vegetation communities provide wildlife habitat components including food, shelter, movement corridors, and breeding opportunities for wildlife species. They are classified in general terms with an emphasis on vegetation structure, vegetation species composition, soil structure, and water availability. Some wildlife species are generalists that use a variety of habitats, while other species are adapted to very specific habitats. Species that are limited to a single habitat type are more vulnerable to habitat loss and disturbance than are generalists and therefore, may be more at risk to experience population declines.

San Ramon (General Plan Area)

The General Plan area encompasses the land within the San Ramon Planning Area. San Ramon is a predominantly suburban residential community located in southern Contra Costa County. The General Plan area encompasses all the developed areas in San Ramon, as well as rural and undeveloped areas of unincorporated Contra Costa County located in Bollinger Canyon, the Tassajara Valley, and within the East Bay Hills along the Alameda County boundary line. A large portion of San Ramon is developed and does not offer contiguous areas of suitable habitat for special-status species or other special-status biological resources. However, San Ramon is in the center of several open space areas that generally represent an ecologically diverse area supporting many plants and animal species, including special-status species. San Ramon's topography is

[1] California Department of Fish and Wildlife (CDFW). 2023. California Natural Diversity Database, Rarefind V. (accessed March 2023).
[2] California Native Plant Society (CNPS). 2023. Inventory of Rare and Endangered Plants of California (online edition, v9-01 0.0) https://www.rareplants.cnps.org (accessed March 2023).
[3] U.S. Fish and Wildlife Service (USFWS). 2023a. National Wetlands Inventory (NWI) Wetlands mapper. Available at: https://www.fws.gov/wetlands/data/mapper.html (accessed March 2023).
[4] USFWS. 2023b. Environmental Conservation Online System, Critical Habitat Mapper [online]. https://ecos.fws.gov/ecp/report/table/critical-habitat.html (accessed March 2023).
[5] USFWS. 2023c. Information for Planning and Conservation (IPaC) [online]. https://ecos.fws.gov/ipac/ (accessed March 2023).

distinguished by its proximity to Mount Diablo to the northeast, the Diablo Range foothills to the north, the Las Trampas Regional Wilderness to the northwest, and Bishop Ranch Regional Preserve to the west.

The General Plan area has the following vegetation communities: annual grassland, blue oak woodland, chamise-redshank chaparral, coastal oak woodland, coastal scrub, montane hardwood, valley foothill riparian, and valley oak woodland. These communities provide resources for a wide variety of wildlife species. The CDFW and the USFWS closely monitor communities classified as sensitive native plant communities or that provide habitat for sensitive wildlife species. The General Plan area also has barren, cropland, urban, and vineyard land uses, which are not vegetation communities. Lacustrine vegetation communities are shown by the CDFW *California Wildlife Habitat Relationships System* (CWHR)[6], however, this community is described further below under the section describing Waters and Wetlands.

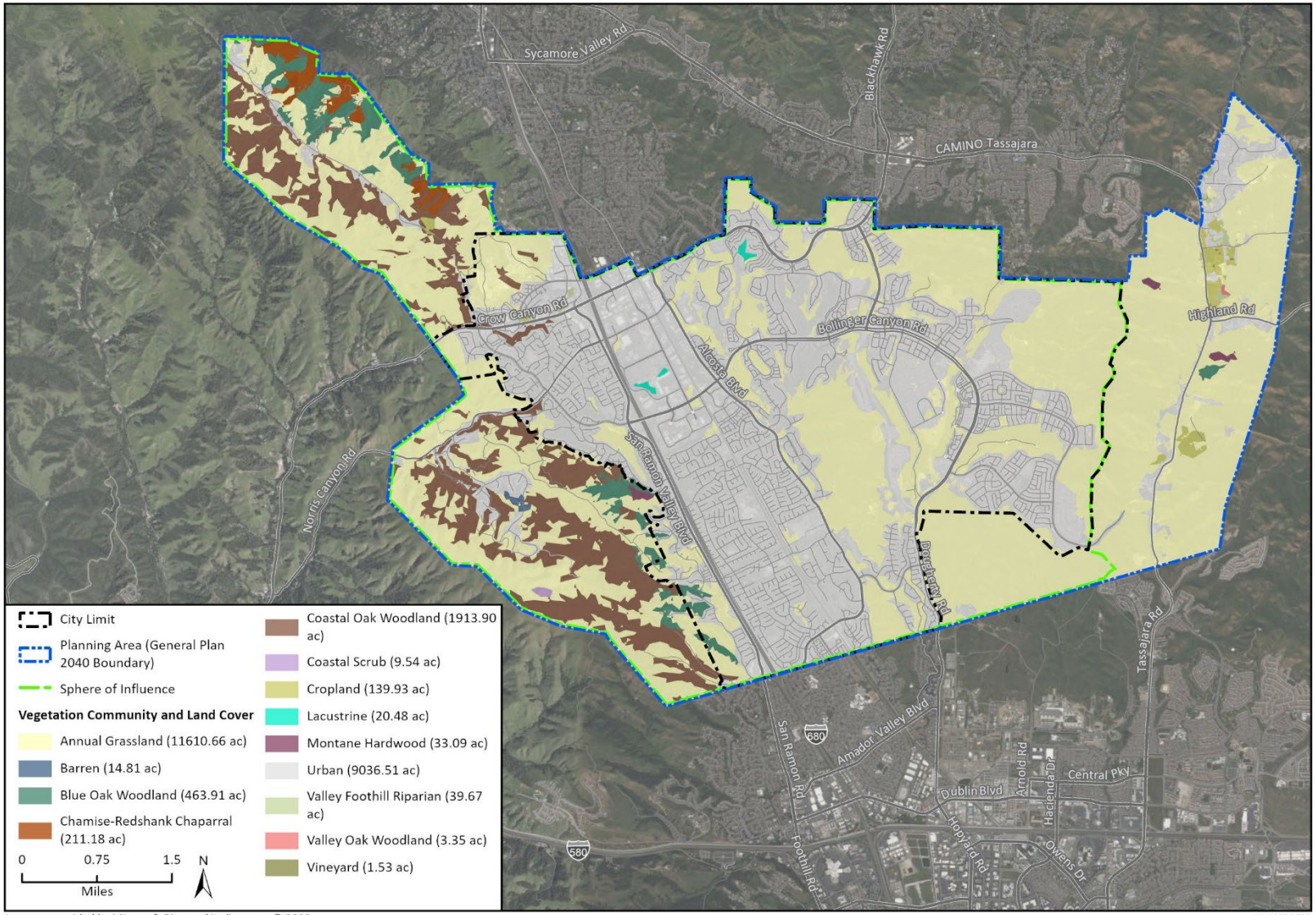
Existing information for the General Plan area and surrounding vicinity was utilized to create a list of vegetation communities and land cover types. The plant community descriptions and nomenclature discussed are based on Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California.* [7] Wildlife species assemblage information was based on existing documentation gathered from the CWHR [8] and *A Manual of California Vegetation, Second Edition* [9]. Table 3.3-1 and Figure 3.3-1 display the major vegetation communities and other land cover types present in the General Plan area.

Table 3.3-1 Vegetation Communities and Land Cover Types in General Plan Area

Type[10]	Acres	Percent
Annual Grassland	11611	49.41%
Blue Oak Woodland	464	1.97%
Chamise-Redshank Chaparral	211	0.90%
Coastal Oak Woodland	1914	8.14%
Coastal Scrub	10	0.04%
Montane Hardwood	33	0.14%
Valley Foothill Riparian	40	0.17%
Valley Oak Woodland	3	0.01%
Barren	15	0.06%
Cropland	140	0.60%
Lacustrine	20	0.09%
Urban	9037	38.46%
Vineyard	2	0.01%
Total	**23499**	**100%**

[6] CDFW. 2014. California Wildlife Habitat Relationships System (CWHR). Available at: https://wildlife.ca.gov/Data/CWHR (accessed March 2023).
[7] Holland, R. F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. California Department of Fish and Wildlife, Nongame Heritage Program. 156 pgs.
[8] CDFW. CWHR, op. cit.
[9] Sawyer, J. O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation, Second Edition*. California Native Plant Society, Sacramento, California.
[10] CDFW CWHR, op. cit.

Figure 3.3-1 Vegetation Communities and Land Cover Types in General Plan Area



Imagery provided by Microsoft Bing and its licensors © 2023.
Vegetation Community and Land Cover data provided by CALFIRE FRAP 2015.

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Fig 3.3-1 Vegetation Communities and Land Cover Types in the General Plan Area

ANNUAL GRASSLAND

Annual grasslands are open grasslands composed primarily of annual herbaceous and forb species. This vegetation community type exists throughout large portions of the General Plan area where introduced annual grasses are the dominant plant species. These include wild oats (*Avena fatua, A. barbata*), soft chess (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), red brome (*B. tectorum*), wild barley (*Hordeum murinum* ssp. *leporinum*), and rattail sixweeks grass (*Festuca myuros*). Common forbs include broadleaf filaree (*Erodium botrys*), redstem filaree (*E. cicutarium*), turkey mullein (*Croton setiger*), true clovers (*Trifolium* spp.), bur clover (*Medicago polymorpha*), popcorn flower (*Plagiobothrys* spp.), California poppy (*Eschscholzia californica*), and many others. Perennial grasses, found in moist, lightly grazed, or relic prairie areas, are dominated by California oatgrass (*Danthonia californica*), Pacific hairgrass (*Deschampsia cespitosa* ssp. *holciformis*), and sweet vernal grass (*Anthoxanthum odoratum*). These alliances can include, but are not limited to, *Avena (barbata, fatua)* semi-natural stands and *Bromus (diandrus, hordeaceous) – Brachypodium distachyon* semi-natural stands.[11] Annual grasslands and relic perennial grasslands within these annual grasses occur in patches of various sizes throughout the state. Annual grassland occurs mostly on flat plains to gently rolling foothills. Climatic conditions are typically Mediterranean, with cool, wet winters and dry, hot summers.

BLUE OAK WOODLANDS

Generally, these woodlands have an over story of scattered trees, although the canopy can be nearly closed. The canopy is dominated by broad-leaved trees 16 feet to 50 feet tall, commonly forming open savanna-like stands on dry ridges and gentle slopes. Blue oak (*Quercus douglasii*) is typically the dominant tree species. Shrubs such as poison oak (*Toxicodendron diversilobum*), California coffeeberry (*Frangula californica*), buckbrush (*Ceanothus cuneatus*), and redberry (*Rhamnus crocea*) are often present but rarely extensive, and often occur on rock outcrops. Typical understory is composed of an extension of Annual Grassland vegetation described above. Blue oak woodland typically corresponds to the *Quercus douglasii* Woodland Alliance.[12]

CHAMISE-REDSHANK CHAPARRAL

This vegetation community can range from nearly pure stands of chamise (*Adenostoma fasciculatum*) or redshank (*A. sparsifolium*) to a mixture of both. Mature chamise-redshank chaparral is single layered, generally lacking well-developed herbaceous ground cover and over story trees. Shrub canopies frequently overlap, producing a nearly impenetrable canopy of interwoven branches. Redshank stands tend to be slightly taller and more open than chamise dominated stands. Fire occurs regularly in chamise-redshank chaparral and influences community structure. Chamise-redshank chaparral typically corresponds to the *Adenostoma fasciculatum* Shrubland Alliance and *Adenostoma sparsifolium* Shrubland Alliance.[13]

COASTAL OAK WOODLANDS

Coastal oak woodlands, which occur throughout the western extent of the General Plan area, are extremely variable. The overstory consists of deciduous and evergreen hardwoods (mostly oaks 15 to 70 feet tall) sometimes mixed with scattered conifers. In mesic sites, the trees are dense and form a closed canopy. In drier sites, the trees are widely spaced, forming an open woodland or

[11] Sawyer et al., op. cit.
[12] Ibid.
[13] Ibid.

savannah. The understory is equally variable. In some instances, it is composed of shrubs from adjacent chaparral or coastal scrub which forms a dense, almost impenetrable understory. More commonly, shrubs are scattered under and between trees. Coastal oak woodlands occupy a variety of Mediterranean type climates that vary from north to south and west to east (the climate becomes hotter and drier toward the south and east). Coastal oak woodland typically corresponds to the *Quercus agrifolia* Forest and Woodland Alliance.[14]

COASTAL SCRUB

Structure of the plant associations that comprise coastal scrub, a vegetation community located sparsely in the western portion of the General Plan area, is characterized by low to moderate-sized shrubs with mesophytic leaves, flexible branches, semi-woody stems growing from a woody base, and a shallow root system. Structure differs among stands, mostly along a gradient that parallels the Pacific coastline. Northern coastal scrub, from Humboldt County to the San Francisco Bay Area, ranges from a patchy oceanside cover of nearly prostrate subshrubs surrounded by grassland to a dense and continuous cover of two layers: an overstory of shrubs up to seven feet tall and a perennial herb/subshrub understory up to one foot tall.

As with structure, composition changes most markedly with progressively more xeric conditions from north to south along the coast. With the change from mesic to xeric sites, dominance appears to shift from evergreen species in the north to drought-deciduous species in the south. Two types of northern coastal scrub are usually recognized. The first type (limited in range) occurs as low-growing patches of bush lupine (*Lupinus arboreus*) and many-colored lupine (*Lupinus variicolor*) at exposed, oceanside sites. The second and more common type of northern coastal scrub usually occurs at less exposed sites. Here coyote brush (*Baccharis pilularis*) dominates the overstory. Other common overstory species are blue blossom ceanothus (*Ceanothus thyrsiflorus*), coffeeberry, salal (*Gaulthoria shallon*), bush monkeyflower (*Diplacus aurantiacus*), blackberry, poison-oak and woolly sunflower (*Eriophyllum lanatum*). Bracken fern (*Pteridium aquilinum*) and swordfern (*Polystichum munitum*) are dominant in the understory; common cowparsnip (*Heracleum maximum*), yerba buena (*Clinopodium douglasii*) and California oatgrass (*Danthonia californica*) are typically present.

Coastal scrub occurs discontinuously in a narrow strip throughout the length of California. Coastal scrub usually occurs within about 20 miles of the ocean. Elevation ranges from sea level to about 3000 feet. Coastal scrub seems to tolerate drier conditions than its associated habitats. It is typical of areas with steep, south-facing slopes; sandy, mudstone or shale soils; and average annual rainfall of less than 12 inches. However, it also regularly occurs on stabilized dunes, flat terraces, and moderate slopes of all aspects where average annual rainfall is up to 24 inches. Coastal scrub typically corresponds to the *Baccharis pilularis* Shrubland Alliance as well as the *Lupinus arboreus* Shrubland Alliance and Semi-Natural Alliance. [15]

MONTANE HARDWOOD

A typical montane hardwood vegetation community is composed of a pronounced hardwood tree layer, with an infrequent and poorly developed shrub stratum, and a sparse herbaceous layer. At higher elevations, scattered huckleberry oak (*Quercus vacciniifolia*) is present amongst an overstory of various conifers including ponderosa pine (*Pinus ponderosa*), Coulter pine (*Pinus coulteri*), California white fir (*Abies concolor*), and Jeffrey pine. At mid–elevations, typical associates include Douglas-fir (*Pseudotsuga menziesii*), tanoak (*Notholithocarpus densiflorus*), Pacific madrone

[14] Ibid.
[15] Sawyer et al., op. cit.

(*Arbutus menziesii*), California black oak (*Quercus kelloggii*), and bristlecone fir (*Abies bracteata*). At lower elevations knobcone pine (*Pinus attenuata*), foothill pine, Oregon white oak (*Quercus garryana*). Understory vegetation is mostly scattered woody shrubs and a few forbs. Elevations range from 300 ft near the Pacific Ocean up to 9000 ft. Montane hardwood typically corresponds to the *Quercus chrysolepis* Forest Alliance. [16]

VALLEY OAK WOODLANDS

Remnant patches of this habitat are found in the Sacramento Valley from Redding south, in the San Joaquin Valley to the Sierra Nevada foothills, in the Tehachapi Mountains, and in valleys of the Coast Range from Lake County to western Los Angeles County. This habitat varies from savanna-like to forest-like stands with partially closed canopies, comprised mostly of winter-deciduous, broad-leaved species. Within the General Plan area, this community occurs only north of Highland Road in the western portion of the area. Canopies of these woodlands are dominated almost exclusively by valley oaks (*Quercus lobata*).[17] The shrub understory consists of poison oak, blue elderberry (*Sambucus Mexicana*), toyon (*Heteromeles arbutifolia*), California coffeeberry, and California blackberry (*Rubus ursinus*). Various species of wild oats, bromes (*Bromus* spp.), barleys (*Hordeum* spp.), ryegrasses (*Festuca* spp.), and needlegrasses (*Stipa* spp.) dominate the ground cover. Valley oak woodland typically corresponds to the *Quercus lobata* Woodland Alliance.[18]

VALLEY FOOTHILL RIPARIAN

Valley foothill riparian vegetation communities are located within the General Plan area north of Highland Road and along Tassajara Creek in the eastern portion of the area. The dominant species in the canopy layer of valley foothill riparian habitats include cottonwood (*Populus* spp.), and valley oak. Subcanopy trees are white alder (*Alnus rhombifolia*), box elder (*Acer negundo*) and Oregon ash (*Fraxinus latifolia*). Typical understory shrub layer plants include California wild rose (*Rosa californica*), California blackberry, blue elderberry, poison oak, and willows (*Salix* spp.). The herbaceous layer consists of sedges (*Carex* spp.), rushes (*Juncus* spp.), grasses, miner's lettuce (*Claytonia perfoliata*), California mugwort (*Artemisia douglasiana*), poison-hemlock (*Conium maculatum*), and hoary nettle (*Urtica dioica* ssp. *holosericea*). These alliances can include, but are not limited to, *Platanus racemosa* Woodland Alliance, and the various *Populus* alliances, depending upon dominant species present.[19]

BARREN

This land cover type is defined by the absence of vegetation. Any area with less than two percent total vegetation cover and less than 10 percent cover by tree or shrub species is defined as barren. Structure and composition of the substrate is largely determined by the region of the state as well as surrounding environment. An example of a barren land cover includes areas of exposed parent rock and talus slope.

CROPLAND

This land cover type is characterized by areas in active agriculture and is an entirely man-made habitat. The structure of vegetation can vary in size, shape, and growing pattern. The dominant cropland use is row crops. Typical crops consist of grasses, brassicas, and forbs. Subcategories of

[16] Ibid.
[17] CDFW CWHR, op. cit.
[18] Sawyer et al., op. cit.
[19] Ibid.

cropland habitat classifications include irrigated hayfield crop, irrigated row and field crop, and irrigated grain crop. Orchards and vineyards are classified separately.

URBAN

This land cover type is completely human-made, comprising residential, commercial, office, institutional, and industrial developed areas. Plant species within urban land cover types are typically comprised of ornamental and other non-native invasive plant species, with large, developed areas lacking vegetation.

VINEYARD

Vineyards are composed of single species planted in rows, usually supported on wood and wire trellises. Vines are normally intertwined in the rows, but open between rows. Rows under the vines are usually sprayed with herbicides to prevent growth of herbaceous plants. Between rows of vines, grasses and other herbaceous plants may be planted or allowed to grow as a cover crop to control erosion. Vineyards can be found on flat alluvial soils in the valley floors, in rolling foothill areas, or on relatively steep slopes. Most vineyards are in valley or foothill areas.

Waters and Wetlands

Definitions

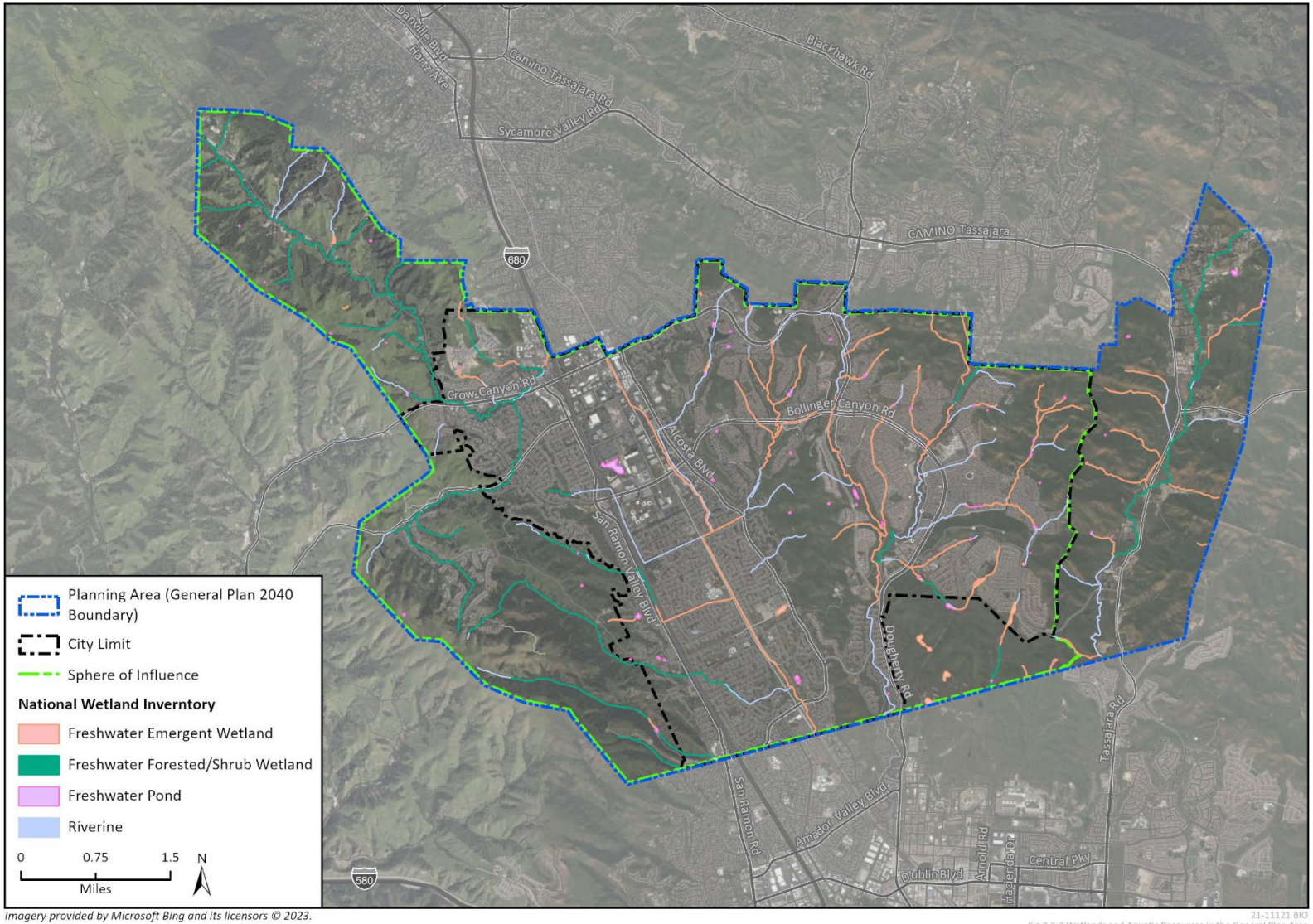
The term "waters of the U.S." has a broad meaning and incorporates both deep-water aquatic habitats and special aquatic sites, including wetlands. Generally, this term applies to the jurisdictional limits of the authority of the U.S. Army Corps of Engineers (USACE) under the Clean Water Act (CWA). Waters of the U.S. includes essentially all surface waters such as all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters.

Wetlands are driven by hydrology and occur where water is present near the soil surface resulting in soil and plant characteristics that are not found in upland (mostly dry) or aquatic (almost always wet and un-vegetated) habitats. Wetlands are generally found in transition zones between upland and aquatic habitats. These terms are further defined along with their application in federal and state regulations below under Section 3.3.3, *Regulatory Framework*.

San Ramon (General Plan Area)

The USFWS NWI is a publicly available resource that provides detailed information on the abundance, characteristics, and distribution of waters and wetlands. It should be noted that some wetland and stream features, such as freshwater seeps and springs, are generally not identified as part of the NWI because of the general scale of the mapping effort. The extent of the major wetlands and waterways in San Ramon, based on NWI mapping, is shown on Figure 3.3-2.

Figure 3.3-2 Wetlands and Aquatic Resources in General Plan Area



Imagery provided by Microsoft Bing and its licensors © 2023.
National Wetlands Inventory data provided by USFWS, 2021.

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Fig 3.3-2 Wetlands and Aquatic Resources in the General Plan Area

Wetland features that have been mapped either within or near San Ramon include freshwater emergent wetland, freshwater forested/shrub wetland, freshwater ponds, and riverine habitat.[20] Wetlands and waters provide habitat for a variety of special-status plant and animal species and are typically subject to USACE jurisdiction under section 404 of the CWA. In addition, the State of California has adopted a no-net-loss policy for wetlands which is administered by the CDFW and State Water Resources Control Board (SWRCB). A description of each of these aquatic features as well as their location within the General Plan area is provided below.

FRESHWATER EMERGENT WETLAND

Freshwater emergent wetlands include all non-tidal waters dominated by emergent herbaceous plant species, mosses, and/or lichens. Wetlands of this type are also low in salinity. Wetlands which lack vegetation can be included in this class if they are less than 20 acres, do not have an active wave-formed or bedrock shoreline feature, and have a low water depth less than 6.6 feet. This wetland type is also mapped by the CWHR. Freshwater emergent wetlands are characterized by erect, rooted herbaceous hydrophytes.

Dominant vegetation is generally perennial monocots. All emergent wetlands are flooded frequently, enough so that the roots of the vegetation prosper in an anaerobic environment. The vegetation may vary in size from small clumps to vast areas covering several kilometers. The acreage of freshwater emergent wetlands in California has decreased dramatically since the turn of the century due to drainage and conversion to other uses, primarily agriculture.

This wetland type can include vernal pools, which are seasonal wetlands formed in small depressions that fill with water during the winter, gradually drying during the spring and becoming completely dry in the summer. These pools are found in only a few places in the world outside of California. Vernal pool vegetation is characterized by herbaceous plants that begin their growth as aquatic or semi- aquatic plants and transition to a dry land environment as the pool dries. Most vernal pool plants are annual herbs. Wildlife species supported by vernal pools include the California tiger salamander (*Ambystoma californiense*) and vernal pool fairy shrimp (*Branchinecta lynchi*).

FRESHWATER FORESTED/SHRUB WETLAND

These wetlands include non-tidal waters that are dominated by trees and shrubs, with emergent herbaceous plants, mosses and/or lichens. The NWI also includes within this category wetlands that lack vegetation if they also exhibit the same criteria as described for freshwater emergent wetlands. Freshwater forested/shrub wetlands are generally dominated by woody vegetation such as shrubs and trees. This wetland category also can include riparian areas. Several features running through the western portion of the General Plan area are classified freshwater forested/shrub wetland likely due to the presence of riparian woody vegetation. Additionally, Tassajara Creek in the eastern portion of the General Plan area is classified mainly as freshwater forested/shrub wetland.

FRESHWATER POND

Freshwater ponds include non-tidal waters, typically less than 20 acres in size and typically with vegetative cover along its edges such as trees, shrubs, emergent herbaceous plants, mosses, and/or lichens. Freshwater ponds can be man-made or natural and typically consist of an area of standing water with variable amounts of shoreline. These wetlands and deep-water habitats are dominated

[20] USFWS NWI, op. cit.

by plants that grow on or below the surface of the water. In the CWHR these features are often shown as lacustrine vegetation communities. Freshwater ponds in the General Plan area are characterized by developed surroundings and man-made features either golf courses or as man-made features at the Bishop Ranch Transportation Center.

RIVERINE

Riverine areas are stream systems that include all wetlands and deep-water areas contained in natural or artificial channels that contain periodically or continuously flowing water. This system may also form a connecting link between two bodies of standing water. Substrates generally consist of rock, cobble, gravel, or sand. Features mapped as riverine wetlands in the NWI include drainages and creeks, such as the southern portion of Tassajara Creek in the General Plan area, Alamo Creek, and South San Ramon Creek.

Sensitive Natural Communities and Critical Habitats

Definitions

Sensitive natural communities are vegetation types, associations, or sub-associations that support concentrations of special-status plant and/or wildlife species, are of relatively limited distribution, and/or are of particular value to wildlife. Currently, CDFW publishes the California Sensitive Natural Communities List online. Natural Communities are evaluated using NatureServe's Heritage Methodology, the same system used to assign global and State rarity ranks for plant and animal species in the CNDDB. Evaluation is done at both the Global (full natural range within and outside of California) and State (within California) levels resulting in a single G (global) and S (State) rank, ranging from 1 (very rare and threatened) to 5 (demonstrably secure). According to the CDFW Vegetation Program, Natural Communities with State ranks of S1-S3 and certain other specified associations are considered imperiled, and thus, potentially of special concern. Riparian areas are also considered sensitive natural communities by CDFW.

Critical habitat is a term used in the federal Endangered Species Act (ESA) and is defined as a specific geographic area (or areas) that contain features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery. These areas provide notice to the public and land managers of the importance of these areas to the conservation of a listed species. Special protections and/or restrictions are possible in these areas when federal funding, permits, licenses, authorizations, or actions occur or are required.

San Ramon (General Plan Area)

The CDFW's CNDDB lists five sensitive natural communities that occur within the U.S. Geological Survey (USGS) *Diablo and Dublin* 7.5-minute series quadrangles and the ten surrounding quadrangles (*Livermore, Tassajara, Antioch South, Clayton, Walnut Creek, Las Trampas Ridge, Hayward, Newark, Niles,* and *La Costa Valley*). These natural communities include Northern Coastal Salt Marsh, Serpentine Bunchgrass, Sycamore Alluvial Woodland, Valley Needlegrass Grassland, and Valley Sink Scrub. Although these sensitive natural communities are recorded in the regional vicinity of San Ramon, none are mapped within the General Plan area.[21]

[21] CDFW CNDDB, op. cit.

The USFWS Critical Habitat Mapper[22] and the National Marine Fisheries Service (NMFS) West Coast Critical Habitat website[23] depict designated critical habitats in the vicinity of the General Plan area. As shown on Figure 3.3-3, critical habitat for Alameda whipsnake (*Masticophis lateralis euryxanthus*) and California red-legged frog (*Rana draytonii*) overlaps with the General Plan area. Critical habitat for Alameda whipsnake overlaps with the northwestern portion of the General Plan area in Bollinger Canyon and Las Trampas Regional Wilderness Preserve as well as a small portion of the northeastern extent of the plan area. Critical habitat for California red-legged frog overlaps with the southeastern portion of the General Plan area, and also borders the southwestern boundary north of I-580. Additionally, critical habitat for California tiger salamander is located southeast of the General Plan area along Collier Canyon Road.[24]

Special-Status Species

Definitions

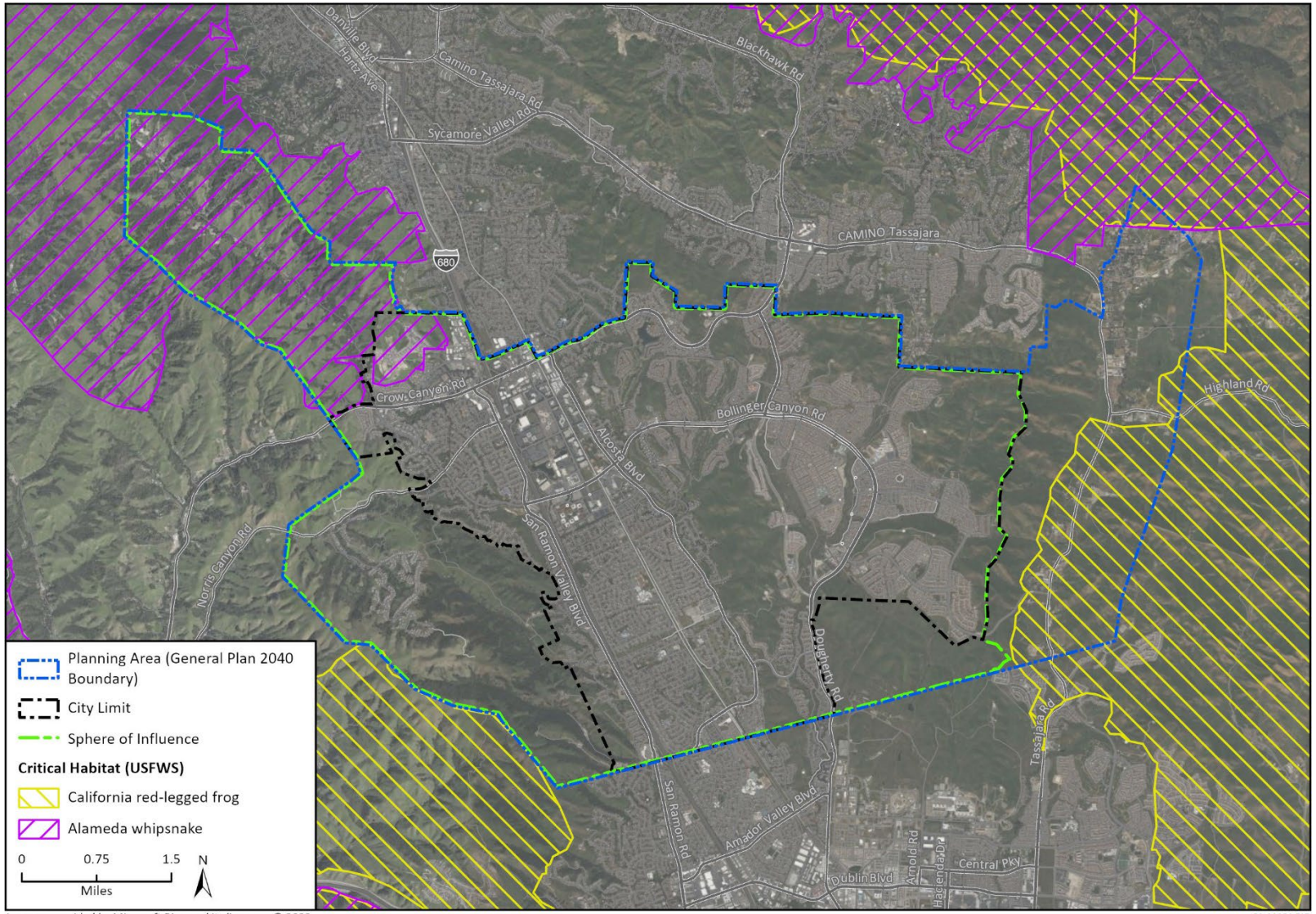
For the purpose of this analysis, special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS and/or NMFS under the ESA; those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); plants listed as rare by the CDFW under the Native Plant Protection Act; and animals designated as "Species of Special Concern," "Fully Protected," or "Watch List" by the CDFW. Those plants ranked as California Rare Plant Rank (CRPR) 1 or 2 are typically regarded as rare, threatened, or endangered under CEQA by lead agencies and were considered as such in this EIR. The CRPR utilizes the following code definitions:

- **List 1A** = Plants presumed extinct in California
- **List 1B.1** = Rare or endangered in California and elsewhere; seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
- **List 1B.2** = Rare or endangered in California and elsewhere; fairly endangered in California (20-80 percent occurrences threatened)
- **List 1B.3** = Rare or endangered in California and elsewhere, not very endangered in California (<20 percent of occurrences threatened, or no current threats known)
- **List 2** = Rare, threatened or endangered in California, but more common elsewhere

CRPR List 3 species are "review list," and CRPR 4 species are considered "watch list" species. CRPR 3 and 4 species do not typically warrant analysis under CEQA except where they are part of a unique community, from the type locality, or designated as rare or significant by local governments, or where cumulative impacts could result in population–level effects. The CRPR 3 and 4 species reported from the region are not locally designated as rare or significant by the City of San Ramon or Contra Costa County General Plans and are not part of a unique community. Additionally, the City of San Ramon is not known to be the type locality for any ranked plant species. Therefore, potential impacts to CRPR 3 and CRPR 4 species were not considered in this analysis.

[22] USFWS Critical Habitat Mapper, op. cit.
[23] National Marine Fisheries Service (NMFS). 2023. Critical Habitat [website]. https://www.fisheries.noaa.gov/national/endangered-species-conservation/critical-habitat#critical-habitat-designations,-maps,-and-gis-data (accessed March 2023).
[24] USFWS Critical Habitat Mapper, op. cit.

Figure 3.3-3 Critical Habitat in General Plan Area



Imagery provided by Microsoft Bing and its licensors © 2023.
Critical Habitat data provided by USFWS, 2022.

21-11121 BIO
Fig 3.3-3 Critical Habitats in the General Plan Area

Species of Special Concern (SSC) is a category used by the CDFW for those species that are considered indicators of regional habitat changes or are considered to be potential future protected species. SSC do not have any special legal status except that which may be afforded by the Fish and Game Code. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands, and these species are considered sensitive as described under the CEQA Appendix G questions.

Queries of the USFWS IPaC [25], the CDFW CNDDB [26], and CNPS *Online Inventory of Rare, Threatened and Endangered Plants of California* were conducted.[27] These queries were conducted to obtain comprehensive information regarding state and federally listed species considered to have potential to occur within the General Plan area.

San Ramon (General Plan Area)

The General Plan area is home to several species protected by federal and State agencies. Important animal species can be found in a variety of habitats in the General Plan area. The CNDDB,[28] CNPS,[29] and USFWS IPaC [30] together list 97 special-status plant and animal species (52 plant species and 45 animal species [inclusive of special animals]) that occur or have potential to occur within the General Plan area. The status and habitat requirements of these species are presented in Appendix B as Tables B-1 and B-2, respectively.

SPECIAL-STATUS PLANTS

Based on the database and literature review, 52 special-status plant species are known to occur, or have potential to occur, in the General Plan area or the surrounding area. Several of these species are associated with sensitive natural communities including open woodland habitats or riparian zones along creeks and waterways. Table B-1 in Appendix B lists these special-status plant species, their listing status, and their CRPR.

Special-status plants that are known or have potential to occur in the General Plan area and surrounding area can occupy a range of habitat types. Some are associated with chaparral, and cismontane woodland such as Mt. Diablo buckwheat (*Eriogonum truncatum*) and Diablo helianthella (*Helianthella castanea*). Others are associated with valley and foothill grasslands such as bent-flowered fiddleneck (*Amsinckia lunar*is), Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), Jepson's coyote-thistle (*Eryngium jepsonii*) and San Joaquin spearscale (Etrixplex joaquinana). Most of the known special-status plant species occurrences are recorded in areas of open space including Bishop Ranch Regional Open Space Preserve, Las Trampas Wilderness Regional Preserve, and Bollinger Canyon within the Planning Area boundary, and Rancho San Ramon Park, Old Ranch Open Space and other smaller parks within the San Ramon City limit. Additionally, some of the species listed are not currently known to be found within the General Plan area limits but are regionally occurring species that could occur in the General Plan area or in the surrounding area.

[25] USFWS IPaC, op. cit.
[26] CDFW CNDDB, op. cit.
[27] CNPS op. cit.
[28] CDFW CNDDB, op. cit.
[29] Ibid.
[30] USFWS IPaC, op. cit.

SPECIAL-STATUS WILDLIFE

Based on the database and literature review, 45 special-status wildlife species are known, or have potential, to occur within the General Plan area or surrounding area. Table B-2 in Appendix B lists these special-status wildlife species, their listing status, and other status designations.

Special-status species are most likely to occur in undeveloped areas and open space areas. However, riparian areas that intersect urban development may also provide habitat and movement corridors for special-status species. The General Plan area and the surrounding area also provide habitat for avian wildlife, including several listed species and other special-status species. Several occurrences of Cooper's hawk (*Accipiter cooperii*), golden eagle (*Aquila chrysaetos*), and northern harrier (*Circus hudsonius*) have been recorded within the General Plan area. Ponds, wetlands, streams, and riparian areas may provide habitat for aquatic and semi-aquatic amphibians and reptiles, including California red-legged frog, California tiger salamander, and Alameda whipsnake.

Special-status bats such as pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western mastiff bat (*Eumops perotis californicus*), and western red bat (*Lasiurus blossevillii*) are State SSCs and have potential to occur within the General Plan area. In addition, although not listed in the CNDDB, mountain lions (*Puma concolor*) are legally classified as "specially protected species." In July 2019, the Center for Biological Diversity petitioned CDFW to list mountain lions as threatened under the CESA within a proposed evolutionarily significant unit (ESU) located in Southern California and along the central coast of California. In April 2020, CDFW found that listing of this ESU may be warranted and designated mountain lion within the ESU as a candidate species under CESA. Mountain lions inhabit diverse habitats across most of California and can be found wherever deer are present, which includes the foothills and mountainous areas within the eastern Bay Area where the General Plan area is located.

Wildlife Movement Corridors

Definitions

Wildlife movement corridors, or habitat linkages, are generally defined as 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 providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

The habitats within the link do not necessarily need to be the same as the habitats that are being linked. Rather, the link merely needs to contain sufficient cover and forage to allow temporary habitation by ground-dwelling species. Typically, habitat linkages are contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending upon the species using a corridor, specific physical resources (such as rock outcroppings, vernal pools, or oak trees) may need to be located within the habitat link at certain intervals to allow slower-moving species to traverse the link. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a short period of time.

Wildlife movement corridors can be both large and small scale. Essential Connectivity Areas (ECAs) are mapped in the report, *California Essential Habitat Connectivity Project: A Strategy for Conserving*

a Connected California and represent principal connections between Natural Landscape Blocks. ECAs are regions in which land conservation and management actions should be prioritized to maintain and enhance connectivity between areas of high ecological importance. [31] ECAs are mapped based on coarse ecological condition indicators, rather than the needs of particular species and thus serve most of the species in each region. It is important to recognize that even areas outside of Natural Landscape Blocks and ECAs support important ecological values and should not be immediately discounted as lacking conservation value without further review.

The western most extent of the General Plan area overlaps with an ECA that runs from Wildcat Canyon Regional Park in the Berkley and Oakland Hills to the north and extending south to the Calaveras Reservoir (see Figure 3.3-4). This ECA, as a part of the Bay Area hills, may serve as a movement corridor for the state provisionally protected Southern California/Central Coast ESU of mountain lion. Small scale habitat corridors important to wildlife movement are also present within the General Plan area, many of which are not mapped as ECAs. Locally, Bishop Ranch Regional Open Space Preserve, Las Trampas Wilderness Regional Preserve, and Bollinger Canyon within the Planning Area boundary, and Rancho San Ramon Park, Old Ranch Open Space and other smaller parks within the San Ramon City limit may serve as smaller scale movement corridors for terrestrial species throughout the General Plan area, as they are mostly continuous vegetated areas connected to larger open space. Additionally, drainages and riverine habitats throughout the General Plan area, including the southern portion of Tassajara Creek, Alamo Creek, and South San Ramon Creek, provide potential fish and other aquatic wildlife movement habitat.

Important Farmland Resources

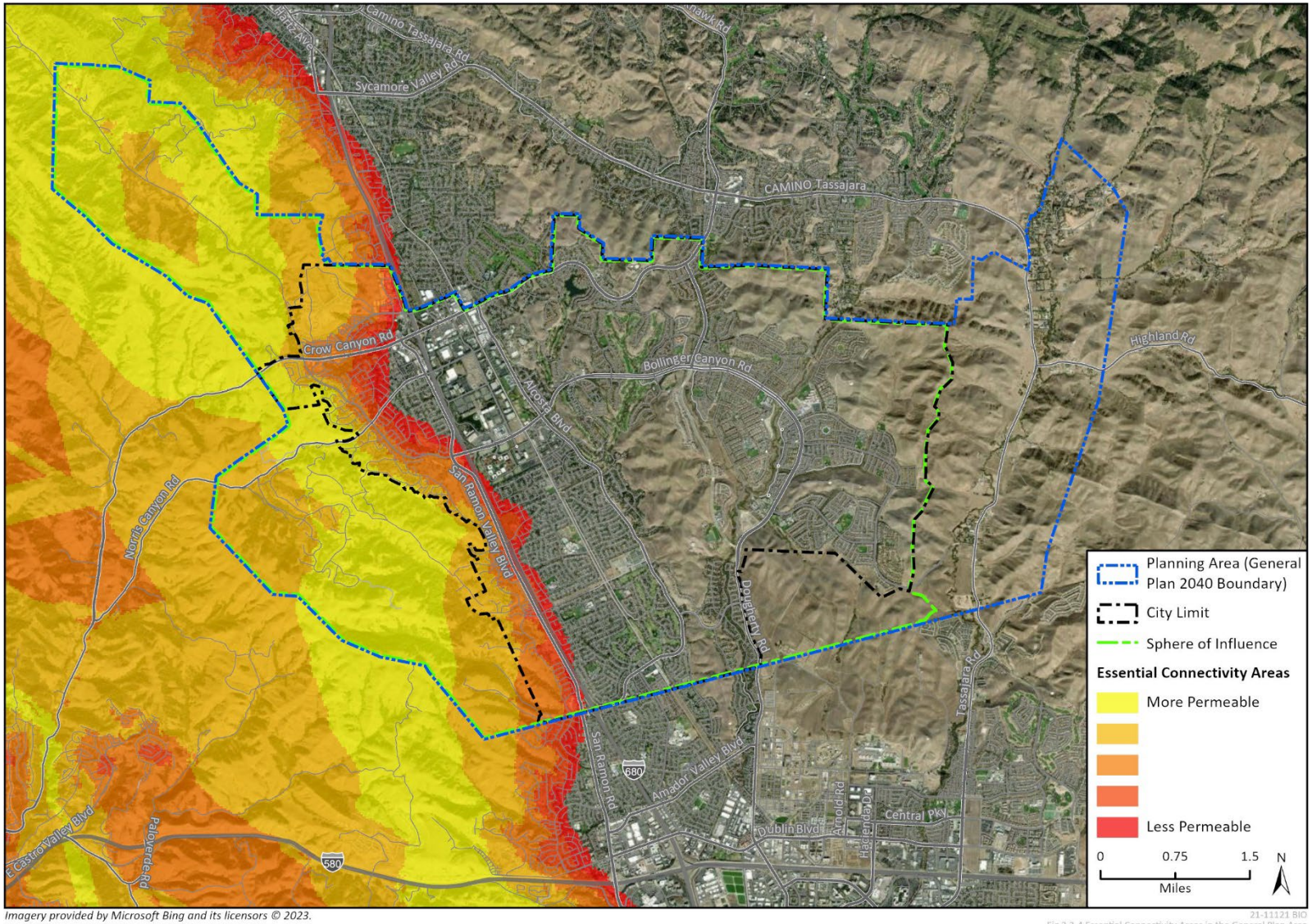
Definitions

To characterize the environmental baseline for agricultural resources, Important Farmland Maps produced by the California Department of Conservation's (DOC) Farmland Mapping and Monitoring Program (FMMP) were reviewed.[32] Unless otherwise expressed, the future use of "Important Farmland" specifically includes the following definitions provided by the DOC:

- **Prime Farmland:** Land which has the best combination of physical and chemical characteristics for producing crops. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming standards.
- **Unique Farmland:** Land of lesser quality soils used for the production of specific high economic value crops. It has the special combination of soil quality, location, growing season and moisture supply needed to produce sustained high quality or high yields of a specific crop when treated and managed according to current farming methods. It is usually irrigated but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Examples of crops include oranges, olives, avocados, rice, grapes and cut flowers.
- **Farmland of Local Importance:** Land of importance to the local agricultural economy as determined by each county's board of supervisors following recommendations by a local advisory committee.

[31] Spencer, W.D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.
[32] California Department of Conservation (DOC). 2023. California Important Farmland Finder [map]. https://maps.conservation.ca.gov/DLRP/CIFF/ (accessed March 2023).

Figure 3.3-4 Essential Wildlife Connectivity Areas in General Plan Area



Imagery provided by Microsoft Bing and its licensors © 2023.
Essential Connectivity data provided by CFWS, 2022.

21-11121 BIO
Fig 3.3-4 Essential Connectivity Areas in the General Plan Area

San Ramon (General Plan Area)

Within the General Plan area, agricultural land uses are located in Bollinger Canyon, the Westside foothills, and the Tassajara Valley. Grazing is the primary agricultural activity in all three areas.[33] Dry field crops (oats, wheat, barley, and hay), walnuts, olives, and grapes (vineyards) are also produced in the Tassajara Valley in the eastern portion of the General Plan area. Figure 3.3-5 identifies agricultural land within the General Plan area, as mapped by the FMMP. As shown in Figure 3.3-5, 5,927 acres of land are mapped as containing Prime Farmland (29 acres), Unique Farmland (60 acres), and Farmland of Local Importance (5,838 acres).

Productive Forestry Resources

Definitions

Forestry resources include forestland, timberland, and timberland production zones. Definitions used for forest land and timberland are those found in the California Public Resources Code (PRC) Sections 12220(g) and 4789.2(g) and California Government Code (CGC) Section 51104(g). These codes define forestland, timberland, and timberland production zones.

San Ramon (General Plan Area)

The General Plan area does not contain any land designated as forestland or timberland.[34] No timberland or timberland production zones exist within the General Plan area.

3.3.3 Biological Resources Regulatory Framework

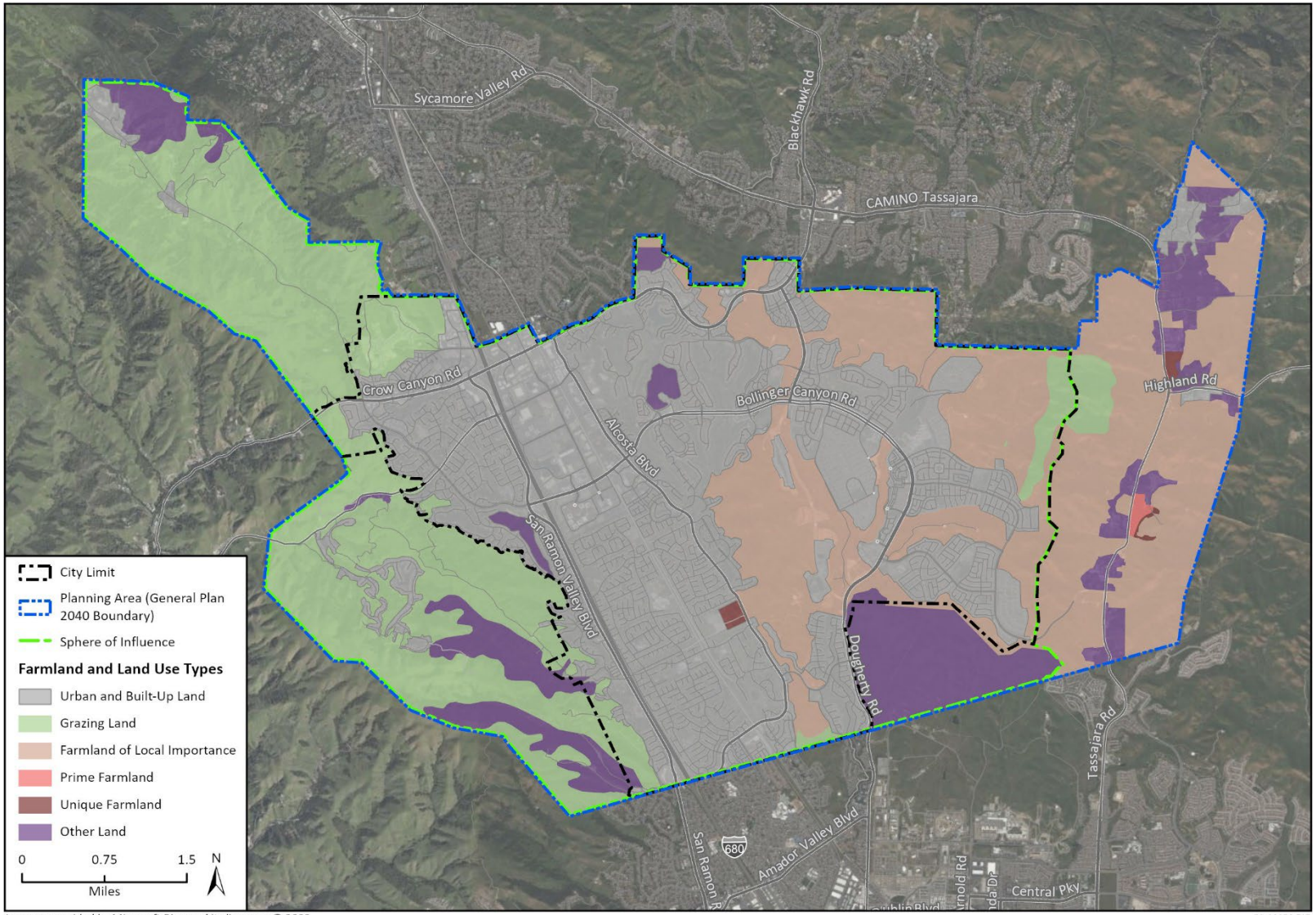
Federal Regulations

Federal Endangered Species Act

Under the ESA, authorization is required to "take" a listed species. Take is defined under Section 3 of the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Under federal regulation (50 Code of Federal Regulations [CFR] Sections 17.3, 222.102); "harm" is further defined to include habitat modification or degradation where it would be expected to result in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Critical habitat is a specific geographic area(s) that is essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery. Section 7 of the ESA outlines procedures for federal interagency cooperation to conserve federally listed species and designated critical habitat.

[33] Ibid.
[34] Ibid.

Figure 3.3-5 Important Farmland in General Plan Area



Imagery provided by Microsoft Bing and its licensors © 2023.
Farmland and land use data provided by CA DOC, 2022.

21-11121 BIO
Fig 3.3-5 Farmland and Landuse Type

Section 7(a)(2) of the ESA and its implementing regulations require federal agencies to consult with USFWS or NMFS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat. For projects where federal action is not involved and take of a listed species may occur, the project proponent may seek to obtain an incidental take permit under Section 10(a) of the ESA. Section 10(a) allows USFWS to permit the incidental take of listed species if such take is accompanied by a Habitat Conservation Plan (HCP) that includes components to minimize and mitigate impacts associated with the take.

The USFWS and NMFS share responsibility and regulatory authority for implementing the ESA (7 United States Code [USC] Section 136, 16 USC Section 1531 et seq.).

Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act

The Migratory Bird Treaty Act (MBTA) authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act provides that it is unlawful, except as permitted by regulations, "to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, […] any migratory bird, or any part, nest, or egg of any such bird" (16 USC Section 703(a)). The Bald and Golden Eagle Protection Act is the primary law protecting eagles, including individuals and their nests and eggs. The USFWS implements the MBTA (16 USC Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). Under the Bald and Golden Eagle Protection Act's Eagle Permit Rule (50 CFR 22.26), USFWS may issue permits to authorize limited, non-purposeful take of bald eagles and golden eagles.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) regulates marine fisheries in U.S. federal waters. The Magnuson-Stevens Act was first passed in 1976 and was revised in 1996 and 2007. The purpose of the Magnuson-Stevens Act is to provide long-term biological and economic sustainability of U.S. marine fisheries.

The NMFS has regulatory authority for implementing the Magnuson-Stevens Act. The NMFS requires regional fishery management councils to develop Fisheries Management Plans (FMPs) specific to their regions, fisheries, and fish stocks. For waters off the U.S. West Coast, the Pacific Fishery Management Council has developed four FMPs, which are implemented through fisheries regulations for coastal pelagic species, groundfish species, highly migratory species, and salmon species. These FMPs also identify Essential Fish Habitat, which is broadly defined as those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity.

River and Harbors Act Section 10

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the Secretary of the Army, acting through the USACE, for the construction of any structure in or over any navigable water of the United States. Regulated activities include dredging or disposal of dredged materials, excavation, filling, re-channelization and construction of any structure or any other modification of a navigable water of the United States.

Clean Water Act (CWA)

Under Section 404 of the CWA, the USACE, with U.S. Environmental Protection Agency (EPA) oversight, has authority to regulate activities that result in discharge of dredged or fill material into

wetlands or other "waters of the United States" (WOTUS). Perennial and intermittent creeks are considered WOTUS if they are hydrologically connected to other jurisdictional waters. In achieving the goals of the CWA, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any discharge of dredged or fill material into jurisdictional wetlands or other jurisdictional WOTUS would require a Section 404 permit from the USACE prior to the start of work. Typically, when a project involves impacts to WOTUS, the goal of no net loss of wetlands is met by compensatory mitigation; in general, the type and location options for compensatory mitigation should comply with the hierarchy established by the USACE/EPA 2008 Mitigation Rule (in descending order): (1) mitigation banks; (2) in-lieu fee programs; and (3) permittee-responsible compensatory mitigation. Also, in accordance with Section 401 of the CWA, applicants for a Section 404 permit must obtain water quality certification from the SWRCB or appropriate RWQCB.

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that to the extent possible federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a federal agency or with assistance from a federal agency.

National Forest Management Act

To establish long-range planning and management of the national forests, Congress passed the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA), and the National Forest Management Act of 1976 (NFMA), that amended the RPA. These laws require comprehensive, long range forest plans to be prepared for each national forest that details, among other things, how the resources within the forest will be managed and used. The management plans stress "multiple use" strategies that encourage the economic use of resources within the forest. Such resources include timber, water, and mineral resources, as well as recreation.

State Regulations

California Endangered Species Act

CESA (California Fish and Game Code Section 2050 et seq.) prohibits take of State-listed threatened and endangered species without a CDFW incidental take permit. Take under CESA is restricted to direct harm of a listed species and does not prohibit indirect harm by way of habitat modification.

Protection of fully protected species is described in California Fish and Game Code Sections 3511, 4700, 5050 and 5515. These statutes prohibit take or possession of fully protected species. Incidental take of fully protected species may be authorized under an approved Natural Communities Conservation Plan (NCCP).

Natural Community Conservation Planning Act

The Natural Communities Conservation Planning Act was established by the California Legislature, is directed by the CDFW, and is implemented by the State, as well as public and private partnerships to protect habitat in California. The Natural Communities Conservation Planning Act takes a regional approach to preserving habitat. An NCCP identifies and provides for the regional protection of

plants, animals, and their habitats, while allowing compatible and appropriate economic activity. Once an NCCP has been approved, CDFW may provide take authorization for all covered species, including fully protected species, Section 2835 of the California Fish and Game Code.

California Fish and Game Code Sections 3503, 3503.5 and 3511

California Fish and Game Code Sections 3503, 3503.5 and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (California Fish and Game Code Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs.

California Native Plant Protection Act

The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (California Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the CDFW at least 10 days in advance of changing the land use to allow for salvage of the plant(s).

Section 1600 et seq. of the California Fish and Game Code

Section 1600 et seq. of the California Fish and Game Code prohibits, without prior notification to CDFW, the substantial diversion or obstruction of the natural flow of, or substantial change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. For these activities to occur, the CDFW must receive written notification regarding the activity in the manner prescribed by the CDFW and may require a lake or streambed alteration agreement. Lakes, ponds, perennial, and intermittent streams and associated riparian vegetation, when present, are subject to this regulation.

Porter-Cologne Water Quality Control Act

Pursuant to Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must also obtain water quality certification under Section 401 from the RWQCB. Additionally, the SWRCB and each of nine local RWQCBs have jurisdiction over “waters of the State” pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements regarding discharges to “isolated” waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the USACE to be Outside of Federal Jurisdiction). The local RWQCB implements this general order for isolated waters not subject to federal jurisdiction.

The CWA and associated federal regulations (Title 40 of the CFR 123.25(a)(9), 122.26(a), 122.26(b)(14)(x) and 122.26(b)(15)) require nearly all construction site operators engaged in clearing, grading, and excavating activities that disturb one acre or more, including smaller sites in a larger common plan of development or sale, to obtain coverage under a National Pollutant Discharge Elimination System (NPDES) permit for their stormwater discharges, and develop a Storm Water Pollution Prevention Plan (SWPPP). The NPDES Program is a federal program which has been delegated to the State of California for implementation through the SWRCB and RWQCBs.

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 RWQCBs may have different requirements and levels of analysis with regard to the issuance of water quality certifications. Generally, an area is a wetland if, under normal circumstances:

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.

Under California State law, waters of the State means "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 Water Board released a legal memorandum confirming the State's jurisdiction over isolated wetlands. The memorandum stated that under the California Porter-Cologne Water Quality Control 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 Porter-Cologne rather than CWA authority.

Farmland Mapping and Monitoring Program

The DOC's FMMP monitors the conversion of the State's farmland to and from agricultural use. County-level data is collected, and a series of maps are prepared that identify eight classifications and uses based on a minimum mapping unit size of 10 acres. The program also produces a biennial report on the amount of land converted from agricultural to non-agricultural use. The program maintains an inventory of State agricultural land and updates the Important Farmland Series Maps every two years. The FMMP is an informational service only and does not constitute State regulation of local land use decisions. Agricultural land is rated according to several variables, including soil quality and irrigation status with Prime Farmland being considered the most optimal for farming practices. Other FMMP designations include Farmland of Local Importance, Grazing Land, and Water.

Land Conservation Act

Better known as the "Williamson Act" (California Administrative Code Section 51200 et seq.), the California Land Conservation Act of 1965 creates a legal arrangement whereby private landowners' contract with local governments to voluntarily restrict land to agricultural and open space uses, protecting it from unnecessary or premature conversion to urban uses. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use rather than potential market value, which saves landowners from 20 percent to 75 percent in property tax liability each year.

Generally, Williamson Act contracts have an initial term of ten years, with renewal occurring automatically each year thereafter. The contracts run with the land and are binding on all succeeding landowners. Land must be in an agricultural preserve to enter into a Williamson Act

contract. Agricultural preserves under Williamson Act contract contain at least 100 contiguous acres of agricultural land unless specific findings are made.

Non-renewal initiations are requested either by the landowner or the local government and are often filed in anticipation of converting farmland to other uses. Most contracted land is terminated through non-renewal. Upon the expiration of the contract, the restrictions are removed and the property tax assessment, which had been gradually increasing over the previous nine-year non-renewal period, returns to full market value.

Local Regulations

City of San Ramon General Plan

The current San Ramon General Plan contains policies related to biological resources, but they would be replaced by the proposed 2040 General Plan.

San Ramon Municipal Code

Chapter 2, of Division D5 – Resource Management, in the San Ramon Municipal Code (SRMC) provides regulations for the protection, preservation, maintenance, and replacement of:

a. Native oak trees
b. The habitat values of oak woodlands
c. Trees of historic or cultural significance
d. Groves and stands of mature native trees
e. Mature trees and native habitat in general

Under this section, a Tree Removal Permit is required prior to relocation, removal, cutting-down, or other acts that cause the destruction of a protected tree; issuance of building permits or grading permits resulting in the removal of a protected tree; or the approval of a discretionary project resulting in the removal of a protected tree.

A protected tree is defined by the SRMC as follows:

a. A native oak tree with a diameter of six or more inches as measured 54 inches above the ground.
b. A heritage, or landmark tree or grove identified by City Council Resolution.
c. Significant groves or stands of trees identified by City Council Resolution.
d. A tree required to be planted, relocated, or preserved that is specifically identified as a condition of approval for a Tree Removal Permit or other discretionary permit, and/or as environmental mitigation for a discretionary permit.
e. A tree within 100 feet of a perennial stream, or within 50 feet of a seasonal stream that is six inches or more in diameter as measured at 54 inches above the ground.
f. A mature tree other than those listed above, that is eight inches or more in diameter as measured at 54 inches above the ground that is not otherwise exempt from the requirement of Chapter 2 of the SRMC.

This chapter is intended to encourage the preservation of trees throughout the community by establishing reasonable provisions for protecting heritage trees and other protected trees and

establishing procedures for review and approval of tree removal and replacement. This section requires applicants to obtain a certified arborist report to address the health and condition of a tree, the rationale for removal, and alternatives for removal.

3.3.4 Impacts and Mitigation Measures

Significance Criteria

The City of San Ramon utilizes the following 2023 *CEQA Guidelines* Appendix G significance criteria questions related to Biological Resources and Agriculture and Forestry Resources.

Would the 2040 General Plan:

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 U.S. 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 US 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 native 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?

g) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

h) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

i) Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timber Production?

j) Result in the loss of forest land or conversion of forest land to non-forest use?

k) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

Approach to Analysis

Environmental impacts to biological, agricultural, and forestry resources have been assessed using impact significance criteria from federal, State, and local regulations. CEQA, Chapter 1, Section 21001(c) states that it is the policy of the State of California to “prevent the elimination of fish and wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities.” Environmental impacts relative to biological, agricultural, and forestry resources

have been assessed using impact significance criteria set forth in the CEQA Guidelines and federal, State, and local plans, regulations, and ordinances.

Biological Resources

The analysis of impacts related to biological resources is based on review of available literature online record searches of the following databases: the CDFW CNDDB,[35] the CNPS *Online Inventory of Rare, Threatened and Endangered Plants of California,*[36] the USFWS NWI,[37] USFWS *Critical Habitat Mapper,*[38] and USFWS IPaC System. Data used for this analysis are summarized in Section 3.3.1. Rincon Biologists evaluated impacts on biological resources based on the likelihood that special-status species, sensitive habitats, wildlife corridors, and protected trees are present within the General Plan area, and the likely effects of construction or operation on these resources. For the purposes of this EIR, the word "substantial" as used in the significance thresholds below 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.

Agricultural and Forestry Resources

The analysis of agricultural and forestry resources is based on review of available literature. The primary source of information reviewed to evaluate impacts in the General Plan area was the DOC FMMP database to search for documented areas of important farmland, Williamson contracts, and forestry lands.[39]

EIR Scoping Comments Consideration

No comments relevant to CEQA were received in response to the EIR NOP specific to biological, agricultural, or forestry resources that need to be addressed in the impacts discussion.

Specific Threshold of Significance

For purposes of this analysis, the following thresholds are used to evaluate the significance of Biological Resources and Agriculture and Forestry Resources impacts resulting from implementation of the proposed plan.

- Result in direct take or habitat removal or alteration for candidate, sensitive, or special-status species.
- Adversely affect any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS.
- Remove, fill, or damage a federally protected wetland.
- Interrupt fish movement in an aquatic channel or impede terrestrial movement via a land corridor.

[35] CDFW CNDDB, op.cit.
[36] CNPS op. cit.
[37] USFWS NWI, op.cit.
[38] USFWS Critical Habitat Mapper, op.cit.
[39] DOC, op. cit.

- Remove, damage, or replace trees designated as protected by the City of San Ramon Tree Ordinance.
- Conflict with the provisions of an applicable habitat conservation plan.
- Result in conversion of agricultural resources to non-agricultural resources.
- Result in conversion of forestry resources to non-forestry resources.

Impact Evaluation

Special-status Species

Significance Criterion a:	Would the proposed plan have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Impact BIO-1 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN COULD RESULT IN DIRECT OR INDIRECT IMPACTS TO SPECIAL-STATUS SPECIES OR THEIR ASSOCIATED HABITATS INCLUDING IMPACTS TO MIGRATORY BIRD NEST SITES. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

Construction

As indicated above in Table 3.3-1, a large portion of the General Plan area is developed and does not provide undisturbed habitat for the special-status species reported or known to occur in or near to San Ramon. Areas that may provide habitat for special-status species are primarily located in the open space and undeveloped areas of the General Plan area including local parks and in riparian areas along creeks and drainages within San Ramon and the surrounding areas.

As shown in Tables B-1 and B-2 in Appendix B, special-status wildlife species with the potential to occur in and near the General Plan area include, for example, California red-legged frog, California tiger salamander, Alameda whipsnake, and special-status raptors including Coopers hawk and northern harrier. Generally, these species are associated with waterways and riparian habitats along creeks and riverine features as well as open space. As such special-status species would most likely be found at the western and eastern extents of the General Plan area in preserves such as Las Trampas Wilderness Regional Preserve, Bishop Ranch Regional Open Space Preserve and the contiguous open space in Bollinger Canyon and Tassajara Valley. Other habitats where these species may be found include riparian habitats along the southern portion of Tassajara Creek in the General Plan area, Alamo Creek, South San Ramon Creek, and other drainages. Additionally, critical habitat for Alameda whipsnake and California red-legged frog overlap with the General Plan area and critical habitat for California tiger salamander is located southeast of the General Plan area along Collier Canyon Road. Special-status plant species with the potential to occur in the General Plan area include, for example, Diablo helianthella, bent-flowered fiddleneck, Congdon's tarplant, Jepson's coyote-thistle, and San Joaquin spearscale. These species would be expected to occur within areas of open space including Bishop Ranch Regional Open Space Preserve, Las Trampas Wilderness Regional Preserve, and Bollinger Canyon within the Planning Area boundary, and Rancho San Ramon Park, Old Ranch Open Space and other smaller parks within the San Ramon City limit.

Areas of blue oak, valley oak, and coastal oak woodlands would likely qualify as sensitive natural communities occurring within the General Plan area. Additionally, riparian habitat occurs along

Tassajara Creek in the General Plan area, Alamo Creek, South San Ramon Creek, and other drainages in the General Plan area.[40]

The 2040 General Plan would facilitate infill development and development within the General Plan area. These areas are currently developed with residential and non-residential uses and do not provide habitat suitable for special-status species described above. The 2040 General Plan designates the Bollinger Canyon, Bishop Ranch Regional Open Space Preserve, Tassajara Valley, and riparian areas along Tassajara Creek and several drainages throughout the General Plan area as either Rural Conservation, Parks, or Open Space land uses. These land use designations would prevent substantial development of the habitat in these open space, riparian habitats, and areas of natural vegetation communities.

The 2040 General Plan would not include changes to existing Rural Conservation, Parks, or Open Space land uses designations, including in regional parks and preserves or along creeks and waterways in the General Plan area. Therefore, the 2040 General Plan would not facilitate permanent development in riparian vegetation along these creeks and drainages. Because the development facilitated by the 2040 General Plan would occur as development and infill within existing developed areas, existing roads, water, and sewer are already in place and would minimize the need for construction of new utilities and infrastructure. However, the 2040 General Plan increases the allowable density that could be constructed on some infill and development sites within the General Plan area, which could require upgraded utilities. The construction of these upgraded facilities could require work within riparian vegetation along creeks and drainages in the General Plan area, resulting in potential temporary riparian and aquatic habitat impacts. These habitats could support several special-status species, such as California red-legged frog and/or California tiger salamander. Additionally, development facilitated by the 2040 General Plan could impact isolated trees and pockets of vegetation in the urbanized areas of the General Plan area. These trees and isolated pockets could provide habitat for special-status species, including migratory nesting birds.

The development facilitated under the 2040 General Plan would be subject to the provisions of the various federal and State natural resources regulations and their respective permitting processes. Additionally, the 2040 General Plan contains guiding and implementing policies that call for the preservation and protection of natural resources and the managed production of natural resources. The Land Use Element and Open Space and Conservation Element guiding policies and implementing policies, listed below, would reduce impacts to special-status species and their habitats.

LAND USE ELEMENT

Policy 4.6-I-6 Residential development in the Rural Conservation designation should mitigate impacts to natural features, sensitive habitat, and agricultural resources as required by local Ordinance or habitat protection plan.

Policy 4.6-I-7 As part of the development review process, conditionally approve projects to mitigate any potential impacts caused by proposed development that could potentially affect sensitive habitat areas, sensitive species habitats, migratory patterns, and riparian corridors identified in the General Plan.

[40] USFWS NWI Wetlands Mapper, op. cit.

OPEN SPACE AND CONSERVATION ELEMENT

Guiding Policy 8.1-G-1: Protect and maintain the quality of biological resources in the San Ramon City limits, while also balancing the needs of growth and development.

Policy 8.1-I-1 Continue to require new land use and development activities to comply with applicable laws and regulations concerning special status species.

Policy 8.1-1-2 When special status species and/or critical habitat may be adversely affected by land use or development activities, require appropriate and feasible mitigation measures in accordance with regulatory agency guidance.

Policy 8.1-I-3 Monitor and, as appropriate, engage regulatory agencies on any proposals to designate critical habitat and/or other special-status species protection designations within the city.

Policy 8.1-I-4 Consider the rights of private property owners during the biological review process and encourage mutually acceptable solutions to special status species and/or critical habitat protection.

Policy 8.3-I-7 Confer with appropriate agencies and organizations to ensure that all development, including Dougherty Valley, the Westside subareas, and any other future development provides adequate mitigation for any impacts to special status species, wetlands, and significant natural biotic communities.

The policies listed above would prevent loss of special-status wildlife habitat in the open space areas throughout the General Plan area. Policies 4.6-I-6 and 4.6-I-7 would require development in the Rural Conservation designation to mitigate impacts to natural features and sensitive habitats as well as create a habitat protection plan as a part of the development review process. Guiding Policy 8.1-G-1 allows growth and development within the General Plan area while also protecting and maintaining the quality of biological resources through several Implementing Polices. Policies 8.1-I-1 and 8.2-I-2 require new land use and development to comply with applicable laws and regulations related to special-status species and implement appropriate and feasible mitigation measures where special-status species and their habitats may be impacted. This would apply to special-status species as defined above under Section 3.3.1, *Environmental Setting*, which includes species listed under the ESA and CESA, plants listed as rare by CDFW, animals designated as "Species of Special Concern," "Fully Protected," or "Watch List" by CDFW, and plants ranked as CRPR 1 or 2. Policy 8.1-I-4 would require biological reviews prior to new development to consider the rights of property owners and find solutions to protect special-status species and critical habitat. Additionally, Policy 8.3-I-7 would require conference with appropriate regulatory agencies to ensure that development provides adequate mitigation for any impacts to special-status species, wetlands, and significant natural biotic communities. These requirements for special-status habitat and species protection as well as biological reviews and agency coordination prior to the approval of new development within the General Plan area would ensure that potential special-status species that could be impacted by future development would be identified and potential impacts would be reduced or avoided. Therefore, implementation of these policies would avoid potential significant impacts to sensitive species identified above under Section 3.3.1.d.

While the policies above would prevent impacts to large tracts of open space that provide habitat for special-status species, as with most urbanized environments, landscape features within the urbanized areas of the General Plan area, such as trees, shrubs, herbaceous plants, and parklands, could serve as temporary habitats for nesting migratory birds. Migratory bird species may use the

General Plan area for nesting during the breeding season and are protected under the California Fish and Game Code and MBTA. Construction-related activities such as vegetation removal, building demolition and/or relocation, grading, materials laydown, access, and infrastructure improvements, and building construction, could result in the disturbance of nesting migratory birds. The most identifiable potential direct impact to migratory bird species would involve the removal of vegetation, particularly trees and landscaping shrubs that may serve as perching or nesting sites for migratory birds. These adverse effects on listed or special-status bird species would represent a potentially significant impact. However, implementation of Mitigation Measure BIO-1 (conduct pre-construction bird surveys and implement avoidance measures prior to removal) would be required for future projects where mature trees and other habitat are present and construction activities are scheduled from early spring to late summer.

Special-status bats such as pallid bat, Townsend's big-eared bat, western mastiff bat, and western red bat are State SSCs and have potential to occur within the General Plan area. Pallid bats and western red bats are found in grasslands, shrublands, woodlands, and forests, and may roost in trees or buildings. Townsend's big-eared bat and western mastiff bat are found in a wide variety of habitats and may roost in abandoned buildings or large trees. Bats prefer open areas or areas under a tree canopy for foraging, and often roost near water. Although the General Plan area consists of several developed areas, large trees, abandoned structures, and buildings in San Ramon and the surrounding less densely populated areas of the General Plan area provide suitable roosting habitat for special-status bat species. Disturbance of maternity roosts by construction activities resulting in roost destruction or abandonment would be a potentially significant impact to bat species and would potentially constitute violations of the California Fish and Game Code. Such adverse effects on special-status bats would be a potentially significant impact. However, implementation of Mitigation Measure BIO-2 (conduct pre-construction roosting bat surveys and implement avoidance measures prior to removal) would be required for future 2040 General Plan projects where trees, abandoned structures, or other habitat for roosting bats is present and construction activities may occur during seasonal periods of bat activity. Therefore, 2040 General Plan construction impacts related to special-status species would be less than significant with mitigation.

Operation

Given that potential impacts to special-status species would occur during construction either directly or indirectly related to habitat modification, there would be no 2040 General Plan operational impacts related to biological resources.

Mitigation Measures

MITIGATION MEASURE BIO-1 CONDUCT PRE-CONSTRUCTION BIRD SURVEYS AND IMPLEMENT AVOIDANCE AND MINIMIZATION MEASURES

For construction activities initiated during the bird nesting season (February 1 – September 15) involving removal of vegetation that could potentially serve as habitat for special-status bird species or other nesting bird habitat, including abandoned structures and other man-made features, a pre-construction nesting bird survey shall be conducted no more than 14 days prior to initiation of ground disturbance and vegetation removal activities. The nesting bird pre-construction survey shall be conducted on foot and shall include a buffer around the construction site at a distance determined by a qualified biologist. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in California Bay Area communities (i.e., qualified biologist). If nests are found, an avoidance buffer shall be determined by a qualified biologist

dependent upon the species, the proposed work activity, and existing disturbances associated with land uses outside of the site. The buffer shall be demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to demarcate the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No ground disturbing activities shall occur within the buffer until the biologist has confirmed that breeding/nesting is completed, and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist on the basis that the encroachment will not be detrimental to an active nest. A report summarizing the pre-construction survey(s) shall be prepared by a qualified biologist and shall be submitted to the City prior to the commencement of construction activities.

Future project site plans shall include a statement acknowledging compliance with the federal MBTA and California Fish and Game Code that includes avoidance of active bird nests and identification of Best Management Practices to avoid impacts to active nests, including checking for nests prior to construction activities during February 1 to September 15 and what to do if an active nest is found so that the nest is not inadvertently impacted during grading or construction activities.

MITIGATION MEASURE BIO-2 CONDUCT PRE-CONSTRUCTION ROOSTING BATS SURVEYS AND IMPLEMENT AVOIDANCE MEASURES PRIOR TO REMOVAL

Prior to the removal or alteration of trees and structures that may serve as roosting habitat for special-status bat species, a qualified biologist shall conduct a focused survey of all trees and structures to be removed or impacted by construction activities to determine whether active roosts of special-status bats are present on site. The survey shall be conducted during seasonal periods of bat activity (March 1 through October 15). The biologist shall have access to all structures and interior attics, as needed. If a colony of bats is found roosting in any structure, tree or other habitat, further surveys, such as night emergent surveys, shall be conducted sufficient to determine the species present and the type of roost (day, night, maternity, etc.).

Tree or structure removal shall be planned for either the spring or the fall and timed to ensure both suitable conditions for the detection of bats and adequate time for tree and/or structure removal to occur during seasonal periods of bat activity exclusive of the breeding season, as described below. Trees and/or structures containing suitable potential bat roost habitat features shall be clearly marked or identified. If no bat roosts are found, the results of the survey will be documented and submitted to the City within 30 days of the survey, after which no further action will be required.

If day roosts are present, the biologist shall prepare a site-specific roosting bat protection plan to be implemented by the contractor following the City's approval. The plan shall incorporate the following guidance as appropriate:

- When possible, removal of trees/structures identified as suitable roosting habitat shall be conducted during seasonal periods of bat activity, including the following:
  a) Between September 1 and about October 15, or before evening temperatures fall below 45 degrees Fahrenheit and/or more than 0.5 inch of rainfall within 24 hours occurs.
  b) Between March 1 and April 15, or after evening temperatures rise above 45 degrees Fahrenheit and/or no more than 0.5 inch of rainfall within 24 hours occurs.

- If a tree /structure must be removed during the maternity season and is identified as potentially containing a colonial maternity roost, then a qualified biologist shall conduct acoustic emergence surveys or implement other appropriate methods to further evaluate if the roost is an active maternity roost. Under the biologist's guidance, the contractor shall implement measures that consist of (or exceed) the following:
  a) If it is determined that the roost is not an active maternity roost, then the roost may be removed in accordance with the other requirements of this measure.
  b) If it is found that an active maternity roost of a colonial roosting species is present, the roost shall not be disturbed during the maternity season (April 15 to August 31) or until the maternity roost has dispersed.
- Tree removal procedures shall be implemented using a two-step tree removal process. This method is conducted over two consecutive days and works by creating noise and vibration by cutting non-habitat branches and limbs from habitat trees using chainsaws only (no excavators or other heavy machinery) on day one. The noise and vibration disturbance, together with the visible alteration of the tree, is very effective in causing bats that emerge nightly to feed to not return to the roost that night. The remainder of the tree is removed on day two.
- Prior to the demolition of vacant structures within the project site, a qualified biologist shall conduct a focused habitat assessment of all structures to be demolished. The habitat assessment shall be conducted enough in advance to ensure the commencement of building demolition can be scheduled during seasonal periods of bat activity (see above), if required. If no signs of day roosting activity are observed, no further actions will be required. If bats or signs of day roosting by bats are observed, a qualified biologist will prepare specific recommendations such as partial dismantling to cause bats to abandon the roost, or humane eviction, both to be conducted during seasonal periods of bat activity, if required. Should maternity roosts be observed the roost shall not be disturbed during the maternity season (April 15 to August 31) or until maternity roost has dispersed. If project schedules do not allow for maternity season avoidance, a bat habitat mitigation and monitoring plan shall be developed to reduce risks to bat pups and consultation with CDFW would be required.
- If the qualified biologist determines a roost is used by a large number of bats (large hibernaculum), bat boxes shall be installed near the project site. The number of bat boxes installed will depend on the size of the hibernaculum and shall be determined through consultation with CDFW. If a maternity colony has become established, all construction activities shall be postponed within a 500-foot buffer around the maternity colony until it is determined by a qualified biologist that the young have dispersed. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately.

Level of Significance

Less than significant with mitigation

Sensitive Natural Communities

Significance Criterion b:	Would the proposed plan have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
Significance Criterion c:	Would the proposed plan 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?

Impact BIO-2 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN COULD ADVERSELY IMPACT RIPARIAN HABITAT, OTHER SENSITIVE NATURAL COMMUNITIES, OR PROTECTED WETLANDS IN THE GENERAL PLAN AREA. IMPLEMENTATION OF FEDERAL, STATE, AND LOCAL REGULATIONS AND POLICIES WOULD ENSURE RIPARIAN HABITAT AND WETLANDS ARE NOT SIGNIFICANTLY IMPACTED. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Riparian habitats have been recorded in and around the General Plan area. According to the NWI database (see Figure 3.3-2), areas of freshwater forested/shrub wetland occur in the eastern part of the General Plan area along Tassajara Creek, as well as in the western portion of the General Plan area flowing through Bollinger Canyon.[41] Additionally, several riverine features occur throughout the General Plan area including along the southern portion of Tassajara Creek, Alamo Creek, and South San Ramon Creek and in drainage canals running throughout the General Plan area. Development facilitated by the 2040 General Plan that would be located near or be bisected by waterways and other tributaries and drainages throughout the General Plan area, would be potentially subject to USACE, CDFW, and RWQCB permitting requirements.

Most of the development facilitated by the 2040 General Plan would be located on infill sites that are already developed with structures and/or parking and are not proximate to wetlands or waterways. Because these areas are urbanized and currently developed, they are unlikely to contain jurisdictional wetlands or other surface waters and associated riparian vegetation zones. However, the infill development facilitated by the 2040 General Plan would increase density in some areas, which could require upgraded utilities or stormwater drainage. The construction of these upgraded facilities could require work, including dredge or fill, within jurisdictional wetlands and streams and could require ground disturbance in riparian habitat associated with these wetlands and streams. For development that would occur in these areas, an aquatic resources delineation would be required to identify the limits and potential jurisdiction of protected waters, wetlands, and sensitive natural communities. Therefore, any proposed development in areas identified as jurisdictional waters and/or wetlands, streambed/banks, or riparian vegetation would be subject to the permit requirements of the USACE, RWQCB, and CDFW, pursuant to Section 404 and 401 of CWA, the Porter-Cologne Water Quality Control Act, and/or California Fish and Game Code Section 1600 *et seq*. Actual jurisdictional areas are determined by the State and federal authorities at the time that permits are requested.

Reasonably foreseeable development within or adjacent to sensitive habitats could result in potential direct impacts through removal of vegetation, filling of wetland habitat, alteration of

[41] USFWS NWI Wetlands Mapper, op. cit.

hydrology, runoff of pollutants into riparian habitats or wetlands, compaction of soils, and/or indirectly through dust and vegetation thinning. The issuance of a grading permit by the engineering services director for ministerial and discretionary projects requires obtaining other permits required by State or federal agencies. These include but are not limited to streambed alteration permits from the CDFW and permits for grading in the vicinity of wetlands and certain watercourses from the USACE and RWQCB. These permit clearances may also be required as conditions of approval for grading work to commence. Approval of permits also requires findings that the proposed grading will not result in erosion, stream sediment, or other adverse off-site effects to riparian habitat.

On future project sites one acre or larger, implementation of the required Stormwater Pollution Prevention Plan Best Management Practices, in accordance with the NPDES construction general permit, during project construction would reduce the potential for eroded soil and any contaminants attached to that soil to contaminate a waterbody following a storm event. Additionally, future developments facilitated by the 2040 General Plan would employ erosion and stormwater control measures as outlined in the SRMC Chapter 2 of Division C7, *Regulation of Grading and Hazardous Conditions*, to protect and enhance the water quality in the city's watercourses pursuant to, and consistent with, the Porter-Cologne Water Quality Control Act and the CWA. Additionally, this chapter requires submittal of an erosion control plan and stormwater pollution prevention plan prior to the issuance of any grading permit. Impacts related to drainage and pollution are further discussed in Section 3.8, *Hydrology and Water Quality*.

The 2040 General Plan contains guiding and implementing policies that would further reduce impacts to riparian and wetland habitats. The following Open Space and Conservation Element and Safety Element policies address development in or near riparian habitat:

OPEN SPACE AND CONSERVATION ELEMENT

Policy 8.1-I-5 Require erosion control plans for proposed new development that require significant grading or are near streams, wetlands, and riparian areas. The plans shall include recommendations for grading practices that prevent erosion, loss of topsoil, and scour of drainageways, consistent with biological and aesthetic values.

Policy 8.3-I-9 Consider alternatives to culverting or channelization of waterways during all stages of the review process.

Policy 8.3-I-14 Maintain regulations for the protection and preservation of hillsides, creeks, and ridgelines as shown in Figure 8-3 [of the General Plan].

SAFETY ELEMENT

Policy 9.4-I-7 Explore new funding mechanisms for enhancing the riparian environment and converting, where possible, flood control channels back to a more natural setting while keeping the existing uses and maintaining sufficient carrying capacity of the channels.

Implementation of these policies, as well as Policies 4.6-I-6, 4.6-I-7, 8.1-I-2, 8.1-I-3, and 8.3-I-7 described under Impact BIO-1, would reduce direct impacts to waters, wetlands and riparian areas during construction by reducing direct and indirect modifications to creeks, embankments, and other waterways in the General Plan area. Furthermore, if potentially jurisdictional waters occur on any site identified by the 2040 General Plan for development, an aquatic resources delineation and

permits issued by the relevant State and/or federal authorities (USACE, RWQCB, and CDFW) would be required that would address potential impacts to those waters. Adherence to State and federal regulations, the SRMC, and implementation of proposed 2040 General Plan guiding and implementing polices would result in a 2040 General Plan sensitive natural community construction impact that is less than significant.

Operation

Given that potential impacts to riparian habitats and wetlands would occur during construction either directly via fill or indirectly related to habitat modification, there would be no 2040 General Plan operational impacts related to sensitive natural communities.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Wildlife Movement Corridors

Significance Criterion d:	Would the proposed plan 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?

Impact BIO-3 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD AVOID IMPACTS TO WILDLIFE MOVEMENT CORRIDORS BY CONSERVING OPEN SPACE AREAS IN THE GENERAL PLAN AREA, AS DIRECTED BY POLICIES IN THE 2040 GENERAL PLAN. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Wildlife movement corridors in the General Plan area are generally located in riparian corridors and creeks and areas of open space in local and regional parks. These creeks may be used by migratory fish and riparian corridors and other undeveloped areas in the city may provide corridors for wildlife movement, including migratory birds and species such as Alameda whipsnake, California tiger salamander, and California red-legged frog when migrating to aquatic breeding habitat and during juvenile dispersal. The 2040 General Plan does not include changes to existing Rural Conservation, Parks, or Open Space land designations, including along creeks and waterways in the General Plan area. As such, the 2040 General Plan would not facilitate permanent development within these wildlife movement corridors. Wildlife movement within areas of open space would not be affected by the 2040 General Plan, because the 2040 General Plan facilitates development in the urbanized areas of the UGB.

The 2040 General Plan would focus on infill development along corridors and on parcels currently developed with structures and/or parking lots. Additionally, proposed 2040 General Plan Implementing Policy 8.3-1-2, listed above under Impact BIO- 2, addresses preservation and restoration of creek and riparian corridor habitats that may serve as open space and wildlife corridors. Several other policies listed above under Impact BIO-2 require development setbacks along creek protection zones, riparian areas, wetlands, and other areas that function as fish and

wildlife movement corridors. These policies would help to preserve important local wildlife corridors present in creeks and riparian areas as new development is permitted throughout the General Plan area.

Furthermore, the following 2040 General Plan Open Space and Conservation Element guiding policies and implementing policies would provide for a connected open space network that in turn could facilitate wildlife movement.

Guiding Policy 8.3-G-1: Acquire, preserve, and maintain open space and its natural resources for future generations.

Policy 8.3-G-2 Strengthen the City's partnership with East Bay Regional Parks District, Contra Costa County, other jurisdictions and private organizations to expand the ridgeline and hillside open space system in the city.

Policy 8.3-I-4 Require maintenance plans for open space areas, including identified natural resources such as ridges and waterways.

Policy 8.3-I-5 Through the development review process, encourage wildlife corridors to provide connectivity between established open space areas, where deemed appropriate.

Policy 8.3-I-6 New development shall provide open space through the dedication of land, as appropriate, through the use of an irrevocable instrument or payment of impact fee.

Guiding Policy 8.4-G-1: Support regional efforts to expand the ridgeline and hillside open space system through joint efforts with East Bay Regional Parks District, Contra Costa County and nonprofit trustee agencies.

Policy 8.4-I-1 Confer with appropriate agencies and organizations in the creation of an institutional framework and financing mechanisms necessary to acquire additional ridgeline areas and agricultural lands, and to preserve, restore, and manage important open space.

Policy 8.4-I-4 Continue to support the efforts of the Open Space Advisory Committee to recommend measures to protect and preserve Open Space in and contiguous to San Ramon.

Policy 8.4-I-6 Use open space in new development to create buffers that delineate the edge of urban areas.

Policy 8.4-I-7 Encourage the restoration of open space areas as part of new development projects, as appropriate.

Policy 8.4-I-8 Explore funding opportunities to restore habitat on publicly owned open space and to provide assistance, where appropriate, to owners of privately owned land dedicated as permanent open space, to facilitate private restoration efforts.

Policy 8.4-I-9 Prioritize the preservation of open space on lands that are for sale, proposed for development, or can be acquired that have high biological and ecological value, contiguous to existing open space properties or public lands, and provide recreational opportunities such as trail connections.

Policy 8.4-I-12 Confer, through the development review process, with appropriate agencies and organizations to create a connecting region-wide open space system using instruments such as land dedication or public access easements.

Policy 8.4-I-13 Allow appropriate and beneficial improvements on open space lands, subject to standards for environmental protection; city hillside, ridgeline, and creek regulations; avoidance of hazards; and building siting and design that will preserve the open space character of the site. Improvements may include work related to the Geologic Hazard Abatement District, trails, or replanting of native plants.

Considering that the 2040 General Plan would not facilitate development in open space areas, including stream corridors, and that it contains policies to reduce impacts to stream corridors and protect wildlife movement corridors and open space, 2040 General Plan construction impacts related to wildlife movement corridors would be less than significant.

Operation

Given that potential impacts to wildlife movement corridors would occur during construction either directly or indirectly related to open space development, there would be no 2040 General Plan operational impacts related to wildlife movement corridors.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Local Biological Resources Policies or Ordinances Consistency

Significance Criterion e:	Would the proposed plan conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact BIO-4 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD BE REQUIRED TO CONFORM WITH APPLICABLE LOCAL POLICIES AND ORDINANCES PROTECTING BIOLOGICAL RESOURCES. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Development facilitated by the 2040 General Plan would occur on parcels that have mature street trees along their boundaries and sometimes have mature trees on the project site. Removal or alteration of these trees would be subject to Chapter 2 of Division D5 – Resource Management in the SRMC which regulates the protection, preservation, maintenance, and replacement of protected trees in San Ramon. This section addresses the preservation of trees throughout the community and establishes the definition of “protected trees” and protections for these trees. Additionally, this section establishes the procedures for review and approval of tree removal and/or replacement and requires applicants to obtain a certified arborist report when applying for a tree removal permit.

Development facilitated by the 2040 General Plan would be required to comply with Division D5, Chapter 2 of the SRMC for the preservation of protected trees throughout the community. This chapter provides standards related to the relocation, removal, cutting-down, or other act that causes the destruction of a protected tree as well as requirements for a tree removal permit and replacement plantings for any protected tree that would be removed during project construction. In addition to requiring tree removal permits, SRMC Section D5-12 requires measures to protect existing trees during project construction during specific grading activities.

Additionally, the following 2040 General Plan Open Space and Conservation Element policies would help protect trees and other vegetation in the General Plan area:

Policy 8.3-I-1 Preserve, protect, and maintain significant native oak woodlands.

Policy 8.4-I-14 Promote the planting of local native trees and shrubs where development occurs on land surrounding reservoirs and streams, especially adjacent to areas where banks or channels have been modified for flood protection.

Implementation of these policies would require protection and support planting of native trees consistent with the SRMC. Development facilitated by the 2040 General Plan would be required to comply with the SRMC requirements and 2040 General Plan policies listed above as well as all other policies protecting biological resources. Therefore, 2040 General Plan construction impacts related to consistency with local biological resources policies and ordinances would be less than significant.

Operation

Given that potential impacts to trees would occur during construction, there would be no 2040 General Plan operational impact related to consistency with local biological resources policies and ordinances.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation.

Habitat or Natural Community Conservation Plans Consistency

Significance Criterion f:	Would the proposed plan conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Impact BIO-5 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD NOT CONFLICT WITH AN ADOPTED HCP, NCCP, OR OTHER APPROVED LOCAL, REGIONAL, OR STATE HABITAT CONSERVATION PLAN. NO IMPACT WOULD OCCUR.

Construction and Operation

There are no adopted HCPs or NCCPs within the General Plan area.[42] As such, there are no HCPs or NCCPs applicable to the 2040 General Plan. Therefore, development construction facilitated by the 2040 General Plan and operational implementation of General Plan policies would result in no impacts related to consistency with an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan.

Mitigation Measures

No mitigation is required.

Level of Significance

No impact

Farmland Conversion and Williamson Act Zoning Consistency

Significance Criterion g:	Would the proposed plan convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
Significance Criterion k:	Would the proposed plan involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

Impact BIO-6 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD NOT CONVERT PRIME FARMLAND, UNIQUE FARMLAND, OR FARMLAND OF STATEWIDE IMPORTANCE (FARMLAND) TO NON-AGRICULTURAL USE. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

As shown above in Figure 3.3-5, there are 5,927 acres of Important Farmland within the General Plan area, with 5,838 acres consisting of Farmland of Local Importance. For the purposes of CEQA, conversion of Farmland of Local Importance to non-agricultural use is not considered a significant impact pursuant to the thresholds listed above. Thus, only the conversion of Prime Farmland and Unique Farmland would be considered a potentially significant impact.

The purpose of the 2040 General Plan is to guide new development within the General Plan area and plan to accommodate future growth. New development facilitated by the 2040 General Plan would be accommodated primarily through infill on the identified Housing Inventory Sites and through continued annexation of adjacent unincorporated areas within the UGB including the Dougherty Valley Specific Plan area, and several undeveloped parcels in the Westside and Northwest Specific Plan areas. These areas are concentrated within the UGB and are not located on lands designated as Prime Farmland or Unique Farmland.

The Tassajara Valley at the eastern extent of the General Plan area contains all the Prime Farmland acreage (29 acres) and most of the Unique Farmland within the General Plan area. The 2040 General Plan would not cause the conversion of Prime Farmland and Unique Farmland to non-agricultural

[42] USFWS. 2023d. Environmental Conservation Online System: Habitat Conservation Plans. https://ecos.fws.gov/ecp/report/conservation-plans-region-summary?region=8&type=HCP (accessed March 2023).

use; however, the plan guides the process for annexing new land to the UGB and provides the comprehensive planning process which would guide new development activities in the area.

The 2040 General Plan contains the following Open Space and Conservation Element guiding policies and policies that would reduce impacts associated with conversion of Prime Farmland and Unique Farmland to non-agricultural use:

Guiding Policy 8.5-G-1: Encourage the continuation of appropriate agricultural activities within the City's Planning Area, while being cognizant that such uses may transition to non-agricultural uses in the future.

Policy 8.5-I-1 If Important Farmland is proposed to be converted to non-agricultural use, require evaluation to determine significance of conversion impacts. If the conversion is found to be significant, require mitigation to offset such impacts.

Policy 8.5-I-3 Minimize land use conflicts between agricultural and urban uses through site planning techniques.

Policy 8.5-I-4 Explore opportunities with East Bay Regional Park District (EBRPD), other government agencies, or private organizations to set aside and manage undeveloped lands as open space that are contiguous and sufficient in size to allow continued agricultural uses.

Policy 8.5-I-5 Designate land for rural conservation along the west side of Bollinger Canyon Road near the Las Trampas Regional Wilderness in order to preserve visual open space, to provide opportunities for horse-keeping and part-time ranching, and to maintain compatibility with adjoining agricultural uses.

Implementation of Policy 8.5-I-1 would require an evaluation of impacts associated with conversion of Prime Farmland and Unique Farmland to non-agricultural use and application of mitigation, as necessary. Implementation of policies 8.5-I-3 through 8.5-I-5 would require protection and set aside agricultural lands as open space. Development facilitated by the 2040 General Plan would be required to comply with 2040 General Plan policies listed above. Therefore, 2040 General Plan construction impacts related to loss of Prime Farmland and Unique Farmland or the conversion of agricultural land to non-agricultural uses would be less than significant.

Operation

Given that potential impacts related to the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would occur during construction either directly via fill or indirectly related to development of agricultural lands, there would be no 2040 General Plan operational impacts related to agricultural land conversion.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Significance Criterion h:	Would the proposed plan conflict with existing zoning for agricultural use or a Williamson Act contract?

Impact BIO-7 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD NOT CONFLICT WITH EXISTING ZONING FOR AGRICULTURAL USE OR A WILLIAMSON ACT CONTRACT. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Agricultural land within the General Plan area is designated as Open Space, Rural Conservation, or Parks by the 2040 General Plan. These land use designations allow agricultural activities and, therefore, do not present any agricultural zoning conflicts.

Some lands located within the General Plan area are encumbered by active Williamson Act Contracts. Most of this acreage is in the Bollinger Canyon, the Westside foothills, or the Tassajara Valley. As described above, no development is proposed in these areas under the 2040 General Plan as new infill development is proposed to be located on Housing Inventory Sites in the UGB. Additionally, the following 2040 General Plan Open Space and Conservation Element policy addresses development in or near Williamson Act Contract lands:

> **Policy 8.5-I-2** Process development applications involving land encumbered by Williamson Act contracts only if three years or less remain prior to expiration or cancellation of the contract.

Implementation of Policy 8.5-I-2 would ensure that Williamson Act contract issues are resolved prior to the approval of any land use or development activities in the General Plan area that would convert agricultural land to non-agricultural use. Development facilitated by the 2040 General Plan would be required to comply with this 2040 General Plan policy as well as those policies listed above under Impact BIO-6. Therefore, 2040 General Plan construction impacts related to conflicts with agricultural zoning or Williamson Act contracts would be less than significant.

Operation

Given that potential impacts related to conflicts with agricultural zoning and Williamson Act contracts would occur during construction either directly via fill or indirectly related to development of agricultural lands, there would be no 2040 General Plan operational impacts related to agricultural land conversion.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Forest Land Conversion and Forest/Timberland Zoning Consistency

Significance Criterion i:	Would the proposed plan conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?
Significance Criterion j:	Would the proposed plan result in the loss of forest land or conversion of forest land to non-forest use?
Significance Criterion k:	Would the proposed plan involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use?

Impact BIO-8 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD NOT RESULT IN THE CONVERSION OF LAND USED FOR FORESTRY PURPOSES NOR CONFLICT WITH EXISTING ZONING FOR FORESTRY OR TIMBERLAND USE. NO IMPACT WOULD OCCUR.

Construction and Operation

The General Plan area does not contain land identified as forested or timber area. As such, development facilitated by the 2040 General Plan would not result in or promote the conversion of land used for forestry or timber purposes. In addition, no land within the General Plan area is currently zoned as forest/timberland. As such, the proposed plan would not conflict with forest/timberland zoning for preservation of forestry use. Therefore, development construction facilitated by the 2040 General Plan and operational implementation of General Plan policies would result in no impacts related to conversion of forestry uses to non-forestry uses or forest/timberland zoning consistency.

Mitigation Measures

No mitigation is required.

Level of Significance

No impact

3.3.5 Cumulative Impacts

The geographic scope of the cumulative biological, agriculture, and forestry resources analysis is the General Plan area and the immediate vicinities in adjacent cities and in unincorporated Contra Costa County. The cumulative analysis considers the nearby past, present, and reasonably foreseeable future plans and projects listed in Table 3-1 (refer to Chapter 3, *Environmental Impact Analysis*) located in San Ramon, Danville, and unincorporated Contra Costa County, in addition to the proposed plan.

Special-status Wildlife and Plant Species

Most of the cumulative plans and projects would be located in developed urban areas that have limited potential to support special-status wildlife and plant species. There are waterways that provide habitat for riparian species of flora and fauna, including along Alamo Creek, South San

Ramon Creek, and other drainages. In addition, there are various open space areas throughout San Ramon and the surrounding area, including Las Trampas Wilderness Regional Preserve, Bishop Ranch Regional Open Space Preserve and the contiguous open space in Bollinger Canyon and Tassajara Valley that display grassland and woodland habitats. Riparian areas and the open space grasslands within the cumulative project and plan areas are relatively small and generally isolated areas surrounded by urban development. Cumulative plans and projects listed in Table 3-1 consist predominantly of general plan buildouts including commercial and residential development, area plan buildout, and transportation projects. Development and projects planned within the cumulative projects area would occur in similar, disturbed habitat common in urban areas. However, due to the presence of habitat for some special-status species in and near San Ramon, including the California red-legged frog, California tiger salamander, and Alameda whipsnake, these species also have the potential, albeit low, to occur within the cumulative projects area. Additionally, nesting birds protected by the MBTA, and special-status bat species have the potential to occur within the plan area's surroundings. Standard pre-construction surveys and, if necessary, avoidance procedures would be required for cumulative projects with the potential to impact nesting birds and protected bat species. While there are isolated pockets of natural habitat that can support special-status wildlife and plant species, the urban and built-up nature of the General Plan area as well as the other cumulative plan and projects area precludes the possible adverse cumulative impacts to biological resources related to special-status wildlife and plant species. Therefore, the cumulative impact related to special-status wildlife and plant species would be less than significant.

Sensitive Natural Communities

San Ramon contains several protected aquatic features and riparian areas that would be considered wetlands and/or sensitive natural communities. To address possible cumulative impacts to sensitive natural communities and wetlands, the 2040 General Plan includes several policies under proposed in the Open Space and Conservation Element and Safety Element to address these issues and to avoid impacts to water resources including creeks, rivers, and their associated riparian areas. Most planned developments in the cumulative projects area are designed to address future growth problems, prevent urban sprawl, and minimize developmental impacts to sensitive natural communities. This is accomplished by designing projects to occur in previously developed or highly disturbed areas that the characteristics of lack sensitive natural communities or riparian habitat. Cumulative plans and projects listed in Table 3-1 consist predominantly of general plan buildouts including commercial and residential development, area plan buildout, and transportation projects. Development and projects planned within the cumulative projects area would occur in similar, disturbed habitat common in urban areas. Therefore, the cumulative impact related to sensitive natural communities and associated riparian habitat would be less than significant.

Wildlife Movement Corridors

San Ramon and its surrounding vicinity contain a variety of creeks and open space areas that act as potential movement corridors for fish and wildlife, including in riparian areas along riverine features such as Alamo Creek, South San Ramon Creek, and other drainages. Any future cumulative development that occurs within the General Plan area would have to take into account the potential impact to these corridors. Cumulative plans and projects listed in Table 3-1 consist of predominantly general plan buildouts including commercial and residential development, area plan buildout, and transportation projects. Cumulative development would occur in similar, disturbed habitat common in urban areas. The areas surrounding the potential corridors within San Ramon and its

surroundings in the Bay Area are highly developed, further impeding the movement of species out from these areas. Additionally, the current development plans would adhere to the 2040 General Plan's open space and creek setback requirements to reduce any potential cumulative impacts to fish and wildlife movement corridors to a less then significant level. Therefore, the cumulative impact related to wildlife movement corridors would be less than significant.

Protected Trees

Development may require the removal or encroachment on certain protected trees as listed by the City of San Ramon ordinances. Cumulative plans and projects listed in Table 3-1 consists of predominantly general plan buildouts including commercial and residential development, area plan buildout, and active transportation projects. Development and projects planned within the cumulative projects area would occur in similar, disturbed habitat common in urban areas. Future projects that occur in or near undeveloped areas may require an arborist report to determine the identity of trees planed for removal or encroachment. As such, the 2040 General Plan, in conjunction with other cumulative plans and projects, would be required to adhere to applicable tree ordinances and regulations set by City of San Ramon and nearby City of Danville as well as regulations in unincorporated Contra Costa County. Therefore, the cumulative impact related to protected trees would be less than significant.

Habitat or Natural Community Conservation Plans

Since there are no plan-level impacts related to habitat or natural community conservation plans consistency, there would also be no cumulative impact related to consistency with these plans.

Agricultural Resources

San Ramon and its surroundings contain areas of Prime Farmland, Unique Farmland, and land encumbered by active Williamson Act Contracts. Future cumulative development that occurs within the General Plan area would need to consider the potential impact to these agricultural resources. Cumulative plans and projects listed in Table 3-1 consist of predominantly commercial and residential development, area plan buildout, and transportation projects. It is anticipated that cumulative development would occur in urban areas, outside of agricultural lands, and would not result in the conversion of Prime Farmland or land encumbered by Williamson Act Contracts to non-agricultural land uses. Additionally, the commercial and residential cumulative projects within San Ramon would adhere to the 2040 General Plan Open Space and Conservation Element guiding policies and implementing policies to encourage appropriate agricultural activities in the Planning Area to reduce potential cumulative impacts related to agricultural lands to a level of less than significant. Therefore, the cumulative impact related to agricultural resources would be less than significant.

Forestry Resources

Since there are no plan-level impacts related to forestry resources, there would also be no cumulative impact related to forestry resources.

Overall Level of Cumulative Significance

Less than significant

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3.4 Cultural and Tribal Cultural Resources

3.4.1 Introduction

This section addresses cultural and tribal resources in the General Plan area as well as the relevant regulatory framework. This section also analyzes the potential impacts to cultural resources and tribal cultural resources anticipated to result from development and growth under the 2040 General Plan (proposed plan). Information in this section is based on archival and online research, a search of the Sacred Lands File (SLF) by the Native American Heritage Commission (NAHC), and tribal consultation conducted by the City of San Ramon.

3.4.2 Environmental Setting

Cultural Resources Definitions

The term "cultural resources" under CEQA encompasses historic, archaeological, and tribal cultural resources as well as burial sites. Below is a brief summary of each definition:

- **Historical Resources:** Historical resources are resources listed in, or determined eligible for listing in, the California Register of Historical Resources (CRHR), a resource included in a local register of historical resources or identified in a historical resources survey, or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant. Historical resources may include eligible built environment resources of the precontact[1] or historic periods. For the purposes of this section, historical resources are associated with the recent past. Specifically in California, historical resources are typically associated with the Spanish, Mexican, and American periods in the State's history and are generally less than 200 years of age.
- **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:** Tribal cultural resources include sites, features, places, or objects that are of cultural value to one or more California Native American Tribes.
- **Burial Sites and Cemeteries:** Burial sites and cemeteries are formal or informal locations where human remains have been interred.

Overall Cultural Setting

Following is a brief overview of the indigenous history, ethnographic background, and post-contact history of the General Plan 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.

Indigenous History

The City of San Ramon lies within the San Francisco Bay Area archaeological region.[2] Milliken et al. (2007) generally divided the pre-contact chronology of the Bay Area into five periods: The Early

[1] Precontact refers to the period prior to European settler contact with Native Americans, in this case specifically in California.
[2] Michael J. Moratto, *California Archaeology,* (Salinas: Coyote Press, 1984).

Holocene (8,000-3,500 Before Common Era [BCE]), Early Period (3,500-500 BCE), Lower Middle Period (500 BCE to CE 430 CE), the Upper Middle Period (430-1050 CE), and the Late Period (1050 CE-contact).

It is presumed that early Paleoindian groups lived in the area prior to 8,000 BCE due to evidence in Alta California and the Channel Islands;[3] however, no evidence for that period has been discovered in the Bay Area to date.[4] Sites dating to this period may be submerged or deeply buried as a result of rising sea levels and widespread sediment deposition that has occurred since the Terminal Pleistocene.[5] For this reason, the Terminal Pleistocene Period (ca. 11,700-8,000 BCE) is not discussed here.

The earliest intensive study of archaeology of the San Francisco Bay Area began with N. C. Nelson of the University of California at Berkeley between 1906 and 1908. Mr. Nelson documented over 400 shell mounds throughout the area. Nelson was the first to identify the Bay Area as a discrete archaeological region.[6]

EARLY HOLOCENE (8000-3500 BCE)

Archaeological evidence from the early Holocene is limited as sites dating to this period are likely buried under Holocene alluvial deposits.[7] Available data suggest that the Early Holocene in the San Francisco Bay Area is characterized by a mobile forager pattern and the presence of millingslabs, handstones, and a variety of leaf-shaped projectile points. Two archaeological sites (CA-CCO-696 and CA-CCO-637) that date to this period have been identified in Contra Costa County at the Los Vaqueros Reservoir. The earliest date for the Early Holocene comes from the CA-CCO-696, approximately 7000 BCE.[8]

EARLY PERIOD (3500-600 BCE)

The Early Period saw increased sedentism with the introduction of new ground stone technologies (i.e., mortar and pestle), an increase in regional trade, and the first cut shell beads. The earliest evidence for the use of the mortar and pestle dates to 3800 BCE and comes from CA-CCO-637. By 1500 BCE, mortars and pestles had almost completely replaced millingslabs and handstones, indicating a greater reliance on processing nuts, especially acorns. Faunal evidence from various sites during this period indicate a diverse faunal exploitation pattern based on the presence mussel and other shellfish, marine mammals, terrestrial mammals, and birds within sites dating to this period [9]

The earliest cut bead horizon is also associated with this period. Rectangular *Haliotis* spp. (abalone) and *Olivella spp.* (snail) beads have been identified at several Early Period sites, including CA-CCO-637, CA-SCL-832 in Sunnyvale, and CA-ALA-307 in Berkeley.[10] These early examples of cut beads were recovered from mortuary contexts.

[3] Duncan McLaren et al. *PaleoAmerica: A Journal of Early Human Migration and Dispersal*, "Late Pleistocene Archaeological Discovery Models on the Pacific Coast of North America," 2019.
[4] Randall Milliken et al. *California Prehistory: Colonization, Culture, and Complexity,* "Punctuated Culture Change in the San Francisco Bay Area," (Lanham: Alta Mira Press, 2007).
[5] Brian F. Byrd and L. Mark Raab, "Prehistory of Southern Bight: Models for a New Millennium," 2007.
[6] Moratto, *California Archaeology,* 1984.
[7] Sonia Ragir, *Contributions of the University of California Archeological Research Facility,* "The Early Horizon in Central California Prehistory, (Berkeley: University of California, Berkeley, 1972) and Moratto, *California Archaeology,* 1984.
[8] Milliken et al. "Punctuated Culture Change in the San Francisco Bay Area," 2007.
[9] Stella D'Oro, "Native California prehistory and climate in the San Francisco Bay Area," Master's Theses and Graduate Research, (San Jose State University, 2009).
[10] Milliken et al. "Punctuated Culture Change in the San Francisco Bay Area," 2007.

LOWER MIDDLE PERIOD (500 BCE-CE 430)

The Lower Middle Period saw numerous changes from the previous period. The presence of chipped stone points and bone tools became typical. Rectangular shell beads, common during the Early Period, disappear completely and are replaced by split-beveled and saucer Olivella beads. In addition to the changes in beads, *Haliotis* spp. ornaments, bone tools and ornaments, and basketry awls also became typical, indicating the development of coiled basketry technology. Mortars and pestles continued to be the dominant grinding tool.[11]

Evidence for the Lower Middle Period in the Bay Area comes from sites such as the Emeryville shell mound (CA-ALA-309) and Ellis Landing (CA-CCO-295). CA-ALA-309 is one of the largest shell mounds in the Bay Area and contains multiple cultural sequences. The lower levels of the site, which date to the Middle Period, contain flexed burials with bone implements, chert bifaces, charmstones, and oyster shells.[12]

UPPER MIDDLE PERIOD (430-1050 CE)

Around 430 CE, Olivella saucer bead trade networks that had been established during earlier periods collapsed and over half of known sites occupied during the Lower Middle Period were abandoned. Olivella saucer beads were replaced with Olivella saddle beads. New types of material culture appear within these sites, including elaborate, decorative blades, fishtail charmstones, new Haliotis ornament forms, and mica ornaments. Sea otter bones became more abundant, while salmon and other fish became less abundant, suggesting changes in faunal exploitation patterns from earlier periods.[13] Excavations at CA-ALA-309 indicate that a shift from mussels to oysters to clams may have occurred, and isotopic analysis confirms that San Francisco Bay individuals shifted from hunting higher-trophic-level foods in the Early Period to gathering foods like plants and shellfish in the Middle and Upper Periods.[14] Subsistence analyses at various sites dating to this period indicate a diverse diet that included numerous species of fish, mammals, birds, shellfish, and plant resources that varied by location in the San Francisco Bay Area [15]

LATE PERIOD (CE 1050-CONTACT)

The Late Period saw an increase in social complexity, indicated by differences in burials and an increased level of sedentism relative to preceding periods.[16] An increase in imported Napa Valley obsidian occurred during this time for the production of smaller points, preforms and simple flake tools. Small, finely worked projectile points of the Stockton Serrated series associated with bow and arrow technology appear around 1250 CE. Olivella shell beads disappeared and were replaced with *Olivella* lipped and spire -lopped beads in the south bay and clamshell disk beads in the north bay, where thicker and larger beads indicated higher affluence. The toggle harpoon, hopper mortar, and magnesite tube beads also appeared during this period.[17] This period saw an increase in the

[11] Edward M. Luby and Mark F. Gruber, "The Dead Must be Fed: Symbolic Meanings of the Shellmounds of the San Francisco Bay Area," in *Cambridge Archeological Journal*, April 1999.
[12] Moratto, *California Archaeology,* 1984.
[13] Dwight D. Simons and Tim Carpenter, "Fish Remains From CA-MRN-44/H, Angel Island, Marin County, California," in *Proceedings of the Society for California Archaeology,* Vol. 21, 2009.
[14] Edward Winslow Gifford, "Composition of California Shellmounds," in *American Archaeology and Ethnology,"*(Berkeley: University of California Press, 1916)
Gregory R. Burns et al. "Isotopic Evidence for Changing Residence Patterns Though the Middle to Late Holocene in Central California," (Chico: California State University, Chico, 2012).
[15] Mark G. Hylkema, "Tidal Marsh, Oak Woodlands, and Cultural Florescence in the Southern San Francisco Bay Region," 2002.
[16] Kari Lentz, "Flaked and Ground Stone Technology at CA-ALA-54: Mortar Bowls and Stockton Points," 2012.
[17] Peter Von Der Porten, Katherine Dixon, and Alex DeGeorgey, "Seriation of Clam Shell Disk Beads in Central California," 2014.

intensity of resource exploitation that correlates with an increase in population.[18] Many of the well-known sites of earlier periods, such as the Emeryville shell mound (CA-ALA-309) and the West Berkeley site (CA-ALA-307), were abandoned, as indicated by the lack of Late Period elements. Researchers have suggested that the abandonment of these sites may have resulted from fluctuating climates and drought that occurred throughout the Late Period.[19]

Ethnographic Background

The 2040 General Plan area is located in the traditional tribal territory of the Ohlone (or Costanoan) people. According to early ethnographers, Ohlone territory extends along the California coast from the point where the San Joaquin and Sacramento rivers merge into the San Francisco Bay to Point Sur. Their inland boundary was limited to the interior Coast Ranges. The Ohlone language belongs to the Penutian family, with several distinct dialects throughout the region.[20] Ethnographers divided it into eight regional dialects: Karkin, Chochenyo, Ramaytush, Awaswas, Taymen, Mutsun, Rumsen, and Chalon.[21]

The pre-contact Ohlone were semi-sedentary with a settlement system characterized by base camps and seasonal reserve camps composed of tule reed houses with thatched roofs made of matted grass.[22] Just outside base camps, large sweat houses were built into the ground near stream banks used for spiritual ceremonies and possibly hygiene.[23] Villages were divided into small polities, each of which was governed by a chief responsible for settling disputes, acting as a leader during times of conflict, and supervising economic and ceremonial activities.[24] Social organization appeared flexible to ethnographers.[25]

Archaeological investigations, along with ethnographic evidence have provided evidence of Ohlone mortuary rituals. Cemeteries were set away from villages and visited during the annual Mourning Anniversary.[26] Ceremonial human grave offerings might include Olivella beads, as well as tools like drills, mortars, pestles, hammerstones, bone awls, and utilized flakes.[27] Ohlone mythology includes animal characterization and animism, which was the basis for several creation narratives. Ritually burying animals, such as a wolf, squirrel, deer, mountain lion, gray fox, elk, badger, grizzly bear, blue goose, and bat ray, was commonly practiced. Similar to human burials, ceremonial offerings were added to ritual animal graves like shell beads, ornaments, and exotic goods.[28]

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[18] Moratto, *California Archaeology,* 1984.
[19] Kent G. Lightfoot and Edward M. Luby, "Late Holocene in the San Francisco Bay Area: Temporal Trends in the Use and Abandonment of Shell Mounds in the East Bay," 2002.
[20] Alfred J. Kroeber, *Handbook of the Indians of California* (New York: Dover Publications, Inc., 1925)
[21] Randall Milliken, Laurence Shoup, and Beverly Ortiz. "Ohlone/Costanoan Indians of the San Francisco Peninsula and Their Neighbors, Yesterday and Today," 2009
Doug Jones, "Ritual and Religion in the Ohlone Cultural Area of Central California," 2015
[22] Grant W. Schick, "The Ohlone and the Oak Woodlands: Cultural adaptation in the Santa Clara Valley, Research Manuscript No. 4," 1994
Russell Skowronek, "Sifting the Evidence: Perceptions of Life at the Ohlone (Costanoan) Missions of Alta California," 1998
[23] Doug Jones, "Ritual and Religion in the Ohlone Cultural Area of Central California," 2015
Grant W. Schick, "The Ohlone and the Oak Woodlands: Cultural adaptation in the Santa Clara Valley, Research Manuscript No. 4," 1994
[24] Russell Skowronek, "Sifting the Evidence: Perceptions of Life at the Ohlone (Costanoan) Missions of Alta California," 1998
Alfred J. Kroeber, *Handbook of the Indians of California* (New York: Dover Publications, Inc., 1925)
[25] Russell Skowronek, "Sifting the Evidence: Perceptions of Life at the Ohlone (Costanoan) Missions of Alta California," 1998
[26] Alan Leventhal and Diane DiGiuseppe, "Analysis of the Stone, Bone and Shell Artifacts from CA-SCL-869." In *Final Report on the Burial and Archaeological Data Recovery Program Conducted on a Portion of a Middle Period Ohlone Indian Cemetery, Katwáš Ketneyma Waréeptak (The Four Matriarchs Site) CA-SCL-869, Located at 5912 Cahalan Avenue, Fire Station # 12 San Jose, Santa Clara County, California.* 2009
[27] Alan Leventhal and Diane DiGiuseppe, "Analysis of the Stone, Bone and Shell Artifacts from CA-SCL-869," 2009
[28] Alfred J. Kroeber, *Handbook of the Indians of California* (New York: Dover Publications, Inc., 1925)
Field and Leventhal 2003, Jones 2010)

Ohlone food sources were based on hunting, gathering, and fishing.[29] Larger animals, like bears, might be avoided, but smaller game was hunted and snared on a regular basis.[30] The acorn was an important staple and was prepared by leaching acorn meal in openwork baskets and in holes dug into the sand.[31] The Ohlone also practiced controlled burning to facilitate plant growth.[32] During specific seasons or in times of drought, the reserve camps would be utilized for gathering seasonal food and accessing food storage.[33] The Ohlone fished from tule reed canoes using nets and gorge hooks.[34] Mussels were a particularly important food resource. Sea mammals such as sea lions and seals were hunted, and beached whales were consumed.[35]

Seven Franciscan missions were built in Ohlone territory in the late 1700s, and all members of the Ohlone group were eventually brought into the mission system[36]. After the establishment of the missions, Ohlone population plummeted from approximately 10,000 people in 1770 to 1,300 by 1814.[37] In 1973, the population of people of Ohlone descent was estimated at fewer than 300. The descendants of the Ohlone united in 1971 and have since arranged political and cultural organizations to revitalize aspects of their culture.[38] Today, the descendant communities of the Ohlone can be found in multiple tribes throughout northern and central California.

Post-Contact History

Post-contact history for the State of California is generally divided into three periods: the Spanish Period (1769–1822), Mexican Period (1822–1848), and American Period (1848–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California began with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marked the beginning of the Mexican Period. The signing of the Treaty of Guadalupe Hidalgo in 1848 that ended the Mexican-American War signaled the beginning of the American Period when California became a territory of the United States.

SPANISH PERIOD (1769 – 1822)

Spanish explorers made sailing expeditions along the coast of California between the mid-1500s and mid-1700s. Juan Rodriguez Cabrillo in 1542 led the first European expedition to observe what was known by the Spanish as Alta (upper) California. For more than 200 years, Cabrillo and other Spanish, Portuguese, British, and Russian explorers sailed the Alta California coast and made limited

[29] Alfred J. Kroeber, *Handbook of the Indians of California* (New York: Dover Publications, Inc., 1925)
Russell Skowronek, "Sifting the Evidence: Perceptions of Life at the Ohlone (Costanoan) Missions of Alta California," 1998
[30] Grant W. Schick, "The Ohlone and the Oak Woodlands: Cultural adaptation in the Santa Clara Valley, Research Manuscript No. 4," 1994
[31] Alfred J. Kroeber, *Handbook of the Indians of California* (New York: Dover Publications, Inc., 1925
Richard Levy, "Costanoan." *Handbook of North American Indians,* 1978
[32] Alfred J. Kroeber, *Handbook of the Indians of California* (New York: Dover Publications, Inc., 1925
Russell Skowronek, "Sifting the Evidence: Perceptions of Life at the Ohlone (Costanoan) Missions of Alta California," 1998
[33] Grant W. Schick, "The Ohlone and the Oak Woodlands: Cultural adaptation in the Santa Clara Valley, Research Manuscript No. 4," 1994
[34] Grant W. Schick, "The Ohlone and the Oak Woodlands: Cultural adaptation in the Santa Clara Valley, Research Manuscript No. 4," 1994
[35] Alfred J. Kroeber, *Handbook of the Indians of California* (New York: Dover Publications, Inc., 1925
[36] Alfred J. Kroeber, *Handbook of the Indians of California* (New York: Dover Publications, Inc., 1925
Russell Skowronek, "Sifting the Evidence: Perceptions of Life at the Ohlone (Costanoan) Missions of Alta California," 1998
Randall Milliken, Laurence Shoup, and Beverly Ortiz. "Ohlone/Costanoan Indians of the San Francisco Peninsula and Their Neighbors, Yesterday and Today," 2009
[37] Russell Skowronek, "Sifting the Evidence: Perceptions of Life at the Ohlone (Costanoan) Missions of Alta California," 1998
[38] Russell Skowronek, "Sifting the Evidence: Perceptions of Life at the Ohlone (Costanoan) Missions of Alta California," 1998

inland expeditions, but they did not establish permanent settlements.[39] The Spanish crown laid claim to Alta California based on the surveys conducted by Cabríllo and Vizcaíno.[40]

By the 18th century, Spain developed a three-pronged approach to secure its hold on the territory and counter against other foreign explorers. The Spanish established military forts known as presidios, as well as missions and pueblos (towns) throughout Alta California. The 1769 overland expedition by Captain Gaspár de Portolá marks the beginning of California's Historic period, occurring just after the King of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. Portolá established the Presidio of San Diego as the first Spanish settlement in Alta California in 1769. Franciscan Father Junípero Serra also founded Mission San Diego de Alcalá that same year, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823.

Construction of missions and associated presidios was a major emphasis during the Spanish Period in California to integrate the Native American population into Christianity and communal enterprise. Incentives were also provided to bring settlers to pueblos or towns; just three pueblos were established during the Spanish Period, only two of which were successful and remain as California cities (San José and Los Angeles).

Spain began making land grants in 1784, typically to retiring soldiers, although the grantees were only permitted to inhabit and work the land. The land titles technically remained property of the Spanish king[41] (Livingston 1914).

MEXICAN PERIOD (1822 – 1848)

Several factors kept growth within Alta California to a minimum, including the threat of foreign invasion, political dissatisfaction, and unrest among the indigenous population. After more than a decade of intermittent rebellion and warfare, New Spain won independence from Spain in 1821. In 1822, the Mexican legislative body in California ended isolationist policies designed to protect the Spanish monopoly on trade, and decreed California ports open to foreign merchants.[42]

Extensive land grants were established in the interior during the Mexican Period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. The secularization of the missions following Mexico's independence from Spain resulted in the subdivision of former mission lands and establishment of many additional ranchos. Commonly, former soldiers and well-connected Mexican families were the recipients of these land grants, which now included the title to the land.[43]

During the supremacy of the ranchos (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. Cattle hides became a primary southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. The number of nonnative inhabitants increased during this period because of the influx of explorers, trappers, and ranchers associated with the land grants. The rising California population contributed to the introduction and rise of diseases foreign to the Native American population, who had no associated immunities.

[39] Walton Bean, *California: An Interpretive History,* (New York: McGraw Hill, 1968)
[40] Blake Gumprecht, *The Los Angeles River: Its Life, Death, and Possible Rebirth,* (Maryland: The Johns Hopkins University Press, 1999).
[41] M. Livingston, *Annual Publication of the Historical Society of Southern California* "The Earliest Spanish Land Grants in California," 1914
[42] Ramon Gutierrez et al., *Contested Eden: California Before the Goldrush,* (Berkeley: University of California Berkeley Press, 1998).
[43] Burgess Shumway, *California Ranchos, (*San Bernadino: Borgo Press, 2007).

AMERICAN PERIOD (1848 – PRESENT)

The American Period officially began with the signing of the Treaty of Guadalupe Hidalgo in 1848, in which the United States agreed to pay Mexico $15 million for conquered territory including the present-day states of California, Nevada, Utah, and parts of Colorado, Arizona, New Mexico, and Wyoming. Settlement of Southern California continued to increase during the early American Period. Ranchos were sold or otherwise acquired by Americans, with many subdivided into agricultural parcels or towns.

The discovery of gold in northern California in 1848 led to the California Gold Rush and California's population, particularly that of the bay area, grew exponentially. During this time, San Francisco became California's first true city, growing from a population of 812 to 25,000 in only a few years.[44] During the 1850s cattle boom, rancho vaqueros drove large herds from southern to northern California to feed that region's burgeoning mining and commercial boom.

By 1853, the population of California exceeded 300,000. Thousands of settlers and immigrants continued to pour into the state, particularly after the completion of the transcontinental railroad in 1869. By the 1880s, the railroads had established networks throughout northern California, resulting in fast and affordable shipment of goods, as well to transport new residents to the growing region.[45]

History of San Ramon

San Ramon is located in Contra Costa County in an area known as the San Ramon Valley. The first inhabitants of present-day San Ramon were the Chochenyo language group of the Ohlone Bay and Miwok Indians. By the mid-nineteenth century, the area was part of the Mexican land grant system, which allowed settlers to petition for land ownership and further displace native inhabitants. Present-day San Ramon was part of Rancho San Ramon, also known as Amador, which spanned from southern Danville on the northern end to Dublin on the southern end and encompassed present-day Dougherty Valley.[46] This land was granted to Californio Jose Maria Amador in 1834.

The first non-native settlers to the San Ramon area were Leo and Mary Norris, pioneers who arrived in California in 1846 and who purchased 4,450 acres of the Rancho San Ramon from Amador in 1851. The population of present-day San Ramon, similar to the broader Contra Costa County, increased rapidly during the Gold Rush and continued in the post-Civil War Era. Ranchos were divided and sold for agricultural uses, which were able to intensify due to the development of canals that brought water from the eastern portions of the County to the central portions.

The first settlers village was developed near the intersection of Deerwood Road and San Ramon Valley Boulevard. San Ramon was known by a series of names in the nineteenth century: Brevensville, for a local blacksmith; Lynchville, for the early settler William Lynch; and Limerick, for the numerous Irish immigrants. San Ramon became the permanent name after the Southern Pacific Railroad arrived in the San Ramon Valley in the 1890s.[47]

The San Ramon Branch Line of the Southern Pacific Railroad originally extended from a junction with the Oakland-Stockton main line near Martinez south to San Ramon, a distance of approximately 20

[44] J.M. Guinn, "Gold! Gold! Gold! from San Francisquito! In *Los Angeles", Biography of a City*, edited by John Caughey and LaRee Caughey, (Berkeley: University of California Press, 1977).
[45] Glenn Dumke, "The Boom of the 1880s in Southern California," *Southern California Quarterly,* 76, 1994.
[46] Online Archive of California, "Diseno del Rancho San Ramon," accessed online https://oac.cdlib.org/ark:/13030/hb9199p1qm/?&brand=oac.
[47] Beverly Lane and Ralph Cozine, *Images of America: San Ramon Valley: Alamo, Danville, and San Ramon,*

miles. Service commenced in June 1891. In 1909, the southern terminus of the San Ramon Branch Line was extended south to a junction with the Lathrop-Niles Junction main line near Pleasanton. San Ramon was served with a station, known as San Ramon Siding, near the present-day Iron Horse Trail crossing at Crow Canyon Road. By the mid-1970s, traffic on the line had dwindled to 125 carloads annually and the Southern Pacific petitioned the Interstate Commerce Commission to abandon the branch line. The line was formally abandoned in 1978 and the Counties of Alameda and Contra Costa acquired ownership of the right-of-way within their respective jurisdictions. The present-day Iron Horse Trail follows the alignment of the San Ramon Branch Line from Pleasanton to Concord.

San Ramon and the larger San Ramon Valley remained primarily an agricultural area through the early 1960s, and San Ramon was located within unincorporated Contra Costa County. Residents' interests were guided by the San Ramon Homeowners Association, formed in 1965 by San Ramon residents, to have a collective voice in front of the Contra Costa Planning Commission.[48] Following the completion of Interstate 680 (I-680) through the San Ramon Valley in the mid-1960s, the area experienced rapid growth and the first residential subdivisions followed. The first residential subdivisions were developed in south San Ramon and Twin Creeks. By 1970, San Ramon's population was about 4,000 residents, and it grew to over 22,000 in 1980 following the boom in residential development.[49] The City's incorporation followed shortly thereafter, in July 1983, making the Homeowners Association obsolete. Since incorporation, the City has expanded its limits west to include the Westside Drive area and portions of Norris Canyon, north to include the Crow Canyon area, and east to include the Dougherty Hills and Dougherty Valley.

Commercial development also expanded in the early 1980s when Sunset Development began developing the Bishop Ranch Business Park. The most notable facilities in the Bishop Ranch Business Park are Chevron Park and the BR2600 site (formerly known as the AT&T or Pacific Bell campus), both of which opened in the mid-1980s. The Bishop Ranch Business Park continued to develop and evolve into a mixed-use development pattern with the completion of the retail portion of the City Center project in 2018 and the approval of the CityWalk Master Plan in 2020 for a mix of new residential and non-residential uses. Residential development has been dominated by single-family houses but has changed in recent years as indicated by some higher-density developments and approved mixed-use developments. As of January 2022, San Ramon's population was 83,820 residents.[50]

Existing Cultural Resources

Historical Resources in General Plan Area

A review of the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), and the California State Office of Historic Preservation Built Environment Directory (BERD), and the City's Landmark Overlay Zone resulted in the identification of two resources: one NRHP-listed historic district – Forest Home Farms at 19953 San Ramon Valley Boulevard (APN 211-030-018); and one individual resource, 19251 San Ramon Boulevard (also known as the El Nido [Harlan] House, APN 211-000-057). The El Nido House was assigned a California Historical Resource Status Code of 3S indicating that the resource appears eligible for

[48] "Homeowners group obsolete, will disband," *The San Francisco Examiner,* February 5, 1986.
[49] United States Census Bureau, Decennial Census of Population and Housing
[50] CDF. 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State. Available: <https://dof.ca.gov/forecasting/demographics/estimates/>. (accessed March 2023)

listing in the NRHP. As properties that are designated or eligible for listing in the NRHP, both of the properties identified above qualify as historical resources under CEQA.

Additionally, Contra Costa County maintains a Historic Resources Inventory (HRI) that is periodically updated with historic properties to aid the Board of Supervisors in the identification and preservation of historical resources within the County. The HRI was last updated in 2019 and includes 12 properties/sites in the General Plan area that may qualify as historical resources, pending further analysis.

Archaeological Resources in General Plan Area

The City of San Ramon requested a review of the SLF and received a response from the NAHC on March 30, 2022, that indicated that the 2040 General Plan area is negative for Sacred Lands. It is known that archaeological resources have been identified within San Ramon. However, information on archaeological resources is confidential and will not be further discussed here.

Tribal Cultural Resources in General Plan Area

As part of its Tribal Cultural Resource identification process pursuant to California Assembly Bill (AB) 52 and Senate Bill (SB) 18, the City of San Ramon sent letters via certified mail May 25, 2023 to thirteen Native American tribal contacts identified by the Native American Heritage Commission (NAHC) as being traditionally and culturally affiliated with the General Plan area. The tribal contacts included the following:

- Irene Zwierlein, Chairperson of the Amah Mutsun Band of Mission San Juan Bautista
- Ann Marie Sayers, Chairperson of the Indian Canyon Mutsun Band of Costanoan
- Kanyon Sayers-Roods, Most Likely Descendant of the Indian Canyon Mutsun Band of Costanoan
- Monica Arellano, Vice Chairwoman of the Muwekma Ohlone Indian Tribe of the SF Bay Area
- Charlene Nijmeh, Chairperson of the Muwekma Ohlone Indian Tribe of the SF Bay Area
- Timothy Perez, contact for the North Valley Yokuts Tribe
- Katherine Perez, Chairperson of the North Valley Yokuts Tribe
- Andrew Galvan, contact for the Ohlone Indian Tribe
- Jesus Tarango, Chairperson of the Wilton Rancheria
- Dahlton Brown, Director of Administration of the Wilton Rancheria
- Steven Hutchason, Tribal Historic Preservation Officer of the Wilton Rancheria
- Kenneth Woodrow, Chairperson of the Wuksache Indian Tribe/Eshom Valley Band
- Corrina Gould, Chairperson of the Confederated Villages of Lisjan Nation

Under AB 52 and SB 18, tribes have 30 days and 90 days, respectively, to respond and request consultation.

The City received two responses (from the Confederated Villages of Lisjan Nation and the Wilton Rancheria) requesting consultation and further information:

- On May 26, 2023, the City received a response from a representative for the Wilton Rancheria, stating their request to meet and schedule a consultation call to discuss the project in further detail. On June 8, 2023, the City consulted with Lead Monitor Venesa Kremer via conference call. City staff in attendance included Cindy Yee and Lauren Barr. On June 8, 2023, Cindy Yee emailed Venesa Kremer additional project information. On June 13, 2023, Venesa Kremer

acknowledged receipt of the information and stated that they will continue their review of the documents. Consultation is still on-going with the Wilton Rancheria.

- On May 26, 2023, the City received a response from a representative of the Confederated Villages of Lisjan Nation stating their desire to consult and requesting to schedule a consultation call to discuss the project in further detail. On June 14, 2023, the City consulted with Chairperson Corrina Gould via conference call. City staff in attendance included Lauren Barr and Ryan Driscoll. Chairperson Gould referenced the recommendations provided in a letter to the City from October 2022, related to the previously adopted and State-certified 2023-2031 Housing Element and requested that their suggestions be incorporated into this project. Consultation is still on-going with the Confederated Villages of Lisjan Nation.

The City has not received any additional responses requesting consultation under AB 52 or SB 18 as of the date of this document.

3.4.3 Regulatory Framework

Federal Regulations

National Historic Preservation Act

Properties which are listed in or have been formally determined eligible for listing in the NRHP are automatically listed in the CRHR. The following is therefore presented to provide applicable regulatory context. The NRHP was authorized by Section 101 of the National Historic Preservation Act and is the nation's official list of cultural resources worthy of preservation. The NRHP recognizes the quality of significance in American, state, and local history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects. Per Code of Federal Regulations, Title 36, Part 60.4, a property is eligible for listing in the NRHP if it meets one or more of the following criteria:

Criterion A: Are associated with events that have made a significant contribution to the broad patterns of our history

Criterion B: Are associated with the lives of persons significant in our past

Criterion C: Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction

Criterion D: Have yielded, or may be likely to yield, information important in prehistory or history

In addition to meeting at least one of the above designation criteria, resources must also retain integrity. The National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, defined as follows:

Location: The place where the historic property was constructed or the place where the historic event occurred

Design: The combination of elements that create the form, plan, space, structure, and style of a property

Setting:	The physical environment of a historic property
Materials:	Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property
Workmanship:	The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory
Feeling:	A property's expression of the aesthetic or historic sense of a particular period of time
Association:	The direct link between an important historic event or person and a historic property

Certain properties are generally considered ineligible for listing in the NRHP, including cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions, relocated structures, or commemorative properties. Additionally, a property must be at least 50 years of age to be eligible for listing in the NRHP. The National Park Service states that 50 years is the general estimate of the time needed to develop the necessary historical perspective to evaluate significance (National Park Service 1997:41). Properties which are less than 50 years must be determined to have "exceptional importance" to be considered eligible for NRHP listing.

Archaeological Resources Protection Act

The ARPA amended the Antiquities Act of 1906 (16 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 Indian 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 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 ceremonial and traditional rites.

Native American Graves Protection and Repatriation Act

The 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 Regulations

California Register of Historical Resources

The CRHR was established in 1992 and codified by PRC §§5024.1 and 4852. The CRHR is an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change (Public Resources Code, 5024.1(a)). The criteria for eligibility for the CRHR are consistent with the NRHP criteria but have been modified for state use in order to include a range of historical resources that better reflect the history of California (Public Resources Code, 5024.1(b)). Unlike the NRHP however, the CRHR does not have a defined age threshold for eligibility; rather, a resource may be eligible for the CRHR if it can be demonstrated sufficient time has passed to understand its historical or architectural significance (California Office of Historic Preservation 2006). Further, resources may still be eligible for listing in the CRHR even if they do not retain sufficient integrity for NRHP eligibility (California Office of Historic Preservation 2006). Generally, the California Office of Historic Preservation recommends resources over 45 years of age be recorded and evaluated for historical resources eligibility (California Office of Historic Preservation 1995:2).

Properties are eligible for listing in the CRHR if they meet one of more of the following criteria:

Criterion 1: Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage

Criterion 2: Is associated with the lives of persons important to our past

Criterion 3: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values

Criterion 4: Has yielded, or may be likely to yield, information important in prehistory or history

California Environmental Quality Act

CEQA Guidelines Section 15064.5(a) – CEQA Definition of Historical Resources

California Public Resources Code (PRC) Section 21804.1 requires lead agencies to determine if a project could have a significant impact on historical or unique archaeological resources. As defined in PRC Section 21084.1, a historical resource is a resource listed in, or determined eligible for listing in, the California Register of Historical Resources (CRHR); a resource included in a local register of historical resources or identified in a historical resources survey pursuant to PRC Section 5024.1(g); or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant. PRC Section 21084.1 also states resources meeting the above criteria are presumed to be historically or culturally significant unless the preponderance of evidence demonstrates otherwise. Resources listed in the National Register of Historic Places (NRHP) are automatically listed in the CRHR and are, therefore, historical resources under CEQA. Historical resources may include eligible built environment resources and archaeological resources of the precontact or historic periods.

CEQA Guidelines Section 15064.5(b) – Substantial Adverse Change in Significance

According to CEQA, an impact that results in a substantial adverse change in the significance of a historical resource is considered a significant impact on the environment. A substantial adverse change could result from physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired (CEQA Guidelines §15064.5 [b][1]). Material impairment is defined as demolition or alteration in an adverse manner [of] those characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the CRHR or a local register (CEQA Guidelines §15064.5[b][2][A]).

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC §21083.2[a], [b]).

CEQA Guidelines Section 15064.5(c) – Effects on Archaeological Resources

CEQA Guidelines Section 15064.5(c) provides further guidance on the consideration of archaeological resources. If an archaeological resource does not qualify as a historical resource, it may meet the definition of a "unique archaeological resource" as identified in PRC Section 21083.2. PRC Section 21083.2(g) defines a unique archaeological resource as an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: 1) it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; 2) has a special and particular quality such as being the oldest of its type or the best available example of its type; or 3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological resource does not qualify as a historical or unique archaeological resource, the impacts of a project on those resources will be less than significant and need not be considered further (CEQA Guidelines Section 15064.5[c][4]). CEQA Guidelines Section 15064.5 also provides guidance for addressing the potential presence of human remains, including those discovered during the implementation of a project.

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 for the opportunity to make recommendations for the treatment and disposal of the 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 descendent communities, then under CEQA, the appropriate mitigation 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)).

CEQA Guidelines Section 15126.4 – Cultural Resources Mitigation

Section 15126.4 of the CEQA Guidelines stipulates an EIR shall describe feasible measures to minimize significant adverse impacts. In addition to being fully enforceable, mitigation measures must be completed within a defined time period and be roughly proportional to the impact of the project. Generally, a project which is found to comply with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (the Standards) is considered to be mitigated below a level of significance (CEQA Guidelines Section 15126.4(b)(1)). For historical resources of an archaeological nature, lead agencies should also seek to avoid damaging effects where feasible. Preservation in place is the preferred manner to mitigate impacts to archaeological sites; however, data recovery through excavation may be the only option in certain instances (CEQA Guidelines Section 15126.4(b)(3)).

California Health and Safety Code §7050.5 – Human Remains

Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined if the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission (NAHC) within 24 hours of this identification.

California Public Resources Code §5097.91 – Sacred Lands Inventory

Section 5097.91 of the Public Resources Code established 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. This inventory is referred to as the NAHC Sacred

Lands File. Under Section 5097.9 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 – Tribal Consultation

California Government Code Section 65352.3 (adopted pursuant to the requirements of California Senate Bill [SB] 18) requires local governments to contact, refer plans to, and consult with tribal organizations prior to making a decision to adopt or amend a general or specific plan. The tribal organizations eligible to consult have traditional lands in a local government's jurisdiction, and are identified, upon request, by the Native American Heritage Commission (NAHC). As noted in the California Office of Planning and Research's Tribal Consultation Guidelines (2005); "The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places." SB 18 refers to PRC Section 5097.9 and 5097.995 to define cultural places as:

> Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine (PRC Section 5097.9) and Native American historic, cultural, or sacred site, that is listed or may be eligible for listing in the California Register of Historical Resources pursuant to Section 5024.1, including any historic or prehistoric ruins, any burial ground, any archaeological or historic site (PRC Section 5097.995).

California Assembly Bill 52 – Effects on Tribal Cultural Resources

California Assembly Bill (AB) 52 expanded CEQA by defining a new resource category, "tribal cultural resources." AB 52 establishes that "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). AB 52 further states when feasible, the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe," and meets either of the following criteria:

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k).
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

In recognition of California Native American tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American tribal governments and with respect to the interests and roles of project proponents, it is the intent AB 52 to accomplish all of the following:

1. Recognize that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities.
2. Establish a new category of resources in CEQA called "tribal cultural resources" that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation.
3. Establish examples of mitigation measures for tribal cultural resources that uphold the existing mitigation preference for historical and archaeological resources of preservation in place, if feasible.
4. Recognize that California Native American tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated (because CEQA calls for a sufficient degree of analysis, tribal knowledge about the land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources).
5. In recognition of their governmental status, establish a meaningful consultation process between California Native American tribal governments and lead agencies, respecting the interests and roles of all California Native American tribes and project proponents, and the level of required confidentiality concerning tribal cultural resources, early in the CEQA environmental review process, so that tribal cultural resources can be identified, and culturally appropriate mitigation and mitigation monitoring programs can be considered by the decision-making body of the lead agency.
6. Recognize the unique history of California Native American tribes and uphold existing rights of all California Native American tribes to participate in, and contribute their knowledge to, the environmental review process pursuant to CEQA.
7. Ensure that local and tribal governments, public agencies, and project proponents have information available, early in CEQA environmental review process, for purposes of identifying and addressing potential adverse impacts to tribal cultural resources and to reduce the potential for delay and conflicts in the environmental review process.
8. Enable California Native American tribes to manage and accept conveyances of, and act as caretakers of, tribal cultural resources.
9. Establish that a substantial adverse change to a tribal cultural resource has a significant effect on the environment.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified or adopted. AB 52 requires that lead agencies "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those that have requested notice of projects proposed in the jurisdiction of the lead agency.

Local Regulations

City of San Ramon General Plan

The current City of San Ramon General Plan contains policies related to historical and cultural resources, but they would be replaced by the proposed 2040 General Plan.

San Ramon Municipal Code

Chapter VI of Division D2 in Title D of the San Ramon Municipal Code (SRMC) addresses Landmark Overlay Zone (-L Overlay). The landmark Overlay Zone is intended to accomplish the following:

1. Preventing the demolition, destruction, alteration, misuse, or neglect of historic or architecturally significant buildings that form an important link to San Ramon's past.
2. Promote the conservation, preservation, protection, and enhancement of each landmark district.
3. Stimulate the economic health and visual quality of the community and stabilize and enhance the value of property.
4. Encourage development tailored to the character and significance of each landmark district through a Conservation Plan that includes goals, objectives, and design guidelines and development criteria.
5. Provide a mechanism to resolve conflicts in an orderly fashion between goals of landmark preservation and alternative land uses.

An area within the City of San Ramon may be designated with the -L overlay as a landmark district, and/or a site or individual structure may be designated with the -L overlay as a landmark, if one or more of the following criteria are met, as rigorously applied and supported by findings of historical or architectural significance.

a. The area possesses character, interest, or value as part of the heritage of the City;
b. The area is the location of a significant historical event;
c. The area is identified with a person or group that contributed significantly to the culture and development of the City;
d. Structures within the area exemplify a particular architectural style or way of life important to the City, or are the best remaining examples of an architectural style in a neighborhood;
e. The area or its structures are identified as the work of a person or group whose work has influenced the heritage of the City, the state or the United States; and/or
f. The area has potential for yielding information of archaeological interest.

Portions of an area within the City that do not meet the above criteria may be included within an -L overlay zone if inclusion is found to be essential to the integrity of the district.

Additionally, the SRMC -L Overlay reviews the procedures for design review and demolition of eligible landmarks. The procedures are as follows:

1. Review authority: Except as modified by an adopted Landmark Conservation Plan, Design Review in an -L zone, or of a proposed alteration, enlargement or demolition of a designated historical site shall be conducted in compliance with Chapter D6-II (Permit Review and Decisions), provided that Design Review shall be the responsibility of the Commission.
2. Permit issuance: Commission approval shall be required in compliance with this Subsection prior to the issuance by the Chief Building Inspector of a permit for the construction, alteration, enlargement, or demolition of a building or structure located in an -L zone, or of a designated historical site.

3. Design Review criteria:
    a. In addition to the requirements for Architectural Review in Chapter D6-II the Commission shall consider the proposed demolition, new construction, or alteration in the context of the adopted Landmark Conservation Plan and the architectural or historical value and significance of the site and structure in relation to the Overlay Zone.
    b. Commission considerations shall include the visual relationship of proposed architectural design elements to the surrounding area, including scale, height, rhythm of spacing, pattern of windows and doorways, building siting and relationship to landscaping, roof pitch, architectural style, and structural details, materials, colors, and textures.

4. Demolition requirements: If, after review of demolition permit application, the Commission determines that the structure has historical, architectural or cultural interest or value, the Commission may withhold approval for demolition for 180 calendar days from the date of Commission action, or until environmental review is completed, whichever occurs later.
    a. During the 180 days, the Commission may direct the Department to consult with recognized historic preservation organizations and other civic groups, public agencies and interested citizens, make recommendations for acquisition of property by public or private bodies or agencies, explore the possibility of moving one or more structures or other features, and take any other reasonable measures.
    b. At the end of the 180 days, the demolition permit shall be issued if environmental review determines there will not be a significant impact on the environment and all requirements of the zoning ordinance are met or, if there may be substantial environmental damages, that specific economic, social or other considerations make infeasible the mitigation measures or alternatives identified during environmental review.

       If, after review of the request for a demolition permit, the Commission determines that the building or structure has no substantial historical, architectural, or cultural interest or value, a Building Permit for demolition may be issued.

5. New construction and alteration requirements: The Commission shall not grant Architectural Review approval for new construction or alterations unless it finds that the proposed new construction or alteration will be compatible with, and help achieve the purposes of the -L zone.
6. Landscape material requirements: Director approval shall be required for the removal or alteration of landscape materials identified as significant resources by a Landmark District Conservation Plan. Removal or alteration of the landscape materials shall require a finding that the proposed removal or alteration will not affect the character of the -L zone, or that the safety or persons or property requires the removal or alteration. This Subsection does not restrict the routine maintenance of landscape materials.
7. Effective date: A decision of the Commission in compliance with this Section shall become effective on the 10th day after the date of the decision, unless appealed in compliance with Chapter D7-II (Appeals and Calls for Review).

3.4.4 Impacts and Mitigation Measures

Significance Criteria

The City of San Ramon utilizes the following 2022 *CEQA Guidelines* Appendix G significance criteria questions related to Cultural Resources and Tribal Cultural Resources.

Would the 2040 General Plan:

a) Cause a substantial adverse change in the significance of a historic resource pursuant to §15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §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:

   1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

      or

   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 Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Approach to Analysis

This evaluation focuses on whether implementation of the proposed plan would impact historical, archaeological, or tribal cultural resources.

Both direct and indirect impacts of the proposed plan implementation were considered for this analysis below. Direct impacts are typically associated with construction and/or ground-disturbing activities, and have the potential to immediately alter, diminish, or destroy all or part of the character and quality of a cultural resource or tribal cultural resource. Indirect impacts are typically associated with post-project implementation conditions that have the potential to alter or diminish the setting of a cultural resource or tribal cultural resource by introducing visual intrusions on existing sites that are considered undesirable.

Historical Resources

The analysis of impacts related to historical resources is based on results of review of the NRHP, CRHR, and the California State Office of Historic Preservation (BERD, and the City's Landmark Overlay Zone. Additionally, historical aerials, maps, and available parcel assessor data were consulted. Data used for this analysis are summarized in Section 3.3.1. Rincon Architectural Historians evaluated impacts on historical resources based on the likelihood that historical structures, sites, districts, or landscapes are present (or will become present over the 18-year planning horizon) within the General Plan area, and the likely effects of construction or operation on these resources.

Archeological Resources and Human Remains

The analysis of the impacts related to archeological resources and human remains is based, in part, on the results of extensive archival and online research, and a search of the SLF that was conducted by the NAHC.

Tribal Cultural Resources

In accordance with AB 52 and SB 18, the City of San Ramon sent letters via certified mail to thirteen Native American tribal contacts identified by the NAHC and by the City of San Ramon as being traditionally and culturally affiliated with the 2040 General Plan area. The results of this tribal consultation were utilized for the analysis of impact related to tribal cultural resources.

EIR Scoping Comments Consideration

This section also addresses comments received from the NAHC in response to the EIR NOP related to tribal cultural resources. Results of consultation pursuant to SB 18 and AB 52 are discussed below under Impact CR-4.

Specific Threshold of Significance

For the purposes of this analysis, the following thresholds are used to evaluate the significance of cultural resources and tribal cultural resources impacts resulting from implementation of the proposed plan.

- Impair a historical resource's ability to convey its significance (i.e., affect a resource's inclusion in the NRHP or CRHR) or not adhere to the Secretary of Interior's Standards for Rehabilitation. Specifically, the significance of a historical resource would be "materially impaired" if the proposed plan could result in the following effects at or adjacent to a known historical site within the plan area:
  - Demolish or materially alter in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR; or
  - Demolish or materially alter in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources... or its identification in a historical resources survey... unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
  - Demolish or materially alter in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA. (CEQA Guidelines Section 15064.5[b][2])
- Physically damage or destroy archaeological data or human remains.
- Physically damage, destroy, or otherwise adversely impact a site, feature, place, or cultural landscape with cultural value to a California Native American tribe and that is a resource determined by the City of San Ramon, 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.

Impact Evaluation

Historical Resources

Significance Criterion a:	Would the proposed plan cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Impact CR-1 THE 2040 GENERAL PLAN HAS THE POTENTIAL TO RESULT IN SIGNIFICANT IMPACTS IF DEVELOPMENT CARRIED OUT UNDER THE PLAN WOULD CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF A HISTORICAL RESOURCE. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Construction

Two known historical resources within San Ramon (the General Plan area) were identified – NRHP-listed historic district Forest Home Farms and NRHP-eligible 19251 San Ramon Boulevard, also known as El Nido House.[51] In addition to these known historical resources, there may be other yet unidentified resources within the General Plan area that are age-eligible for listing in the NRHP, CRHR, or locally. Generally, the California Office of Historic Preservation recommends resources over 45 years of age be recorded and evaluated for historical resources eligibility.[52]Although there are no specific development projects associated with the 2040 General Plan, implementation of the proposed plan would guide development extent and distribution within the General Plan area through the year 2040. The 2040 General Plan would facilitate development of residential, commercial, office, institutional, and industrial land uses that could in turn result in the conversion of existing properties and structures to new uses. With relatively limited opportunities for new development in San Ramon, the 2040 General Plan emphasizes infill and reuse development within the City limits and encourages higher-density and mixed-use projects where appropriate. It also includes potential incorporation of adjacent unincorporated areas within the Urban Growth Boundary (UGB). Construction associated with such potential future development may include site preparation, demolition, and other construction activities.

One new land use designation, Multifamily- Very High Density, would accommodate increased residential density within the General Plan area. Additionally, new development and intensification of land use density would focus particularly within the San Ramon Village Specific Plan and City Core area. In addition, such densification could occur over an 18-year planning period through 2040, during which additional structures would become age-eligible in terms of a potential historical resource. As such, such activities have the potential to result in the physical demolition, destruction, relocation, or alteration of identified or potential historical resources.

Effects on historical resources can only be determined once a specific project has been proposed, because the effects are highly dependent on both the individual project site conditions, project activities that may alter the character of a built environment resource, and/or the characteristics of the proposed ground-disturbing activity. Demolition or other structural alteration associated with

[51] The site of El Nido House is part of a proposed development for a new assisted living facility. The project would consist of the construction of a three-story senior assisted living facility. Under the proposed plan, El Nido House would be relocated on site and rehabilitated in accordance with the Secretary of the Interior's Standards for Rehabilitation, as confirmed in a January 2021 report prepared by architectural historian Kara Brunzell, who meets the Secretary of the Interior's Professional Qualification Standards for History and Architectural History. An initial study/mitigated negative declaration was prepared in February 2022 (Clearinghouse Number 2022020163) and the El Nido Assisted Living Development Plan Amendment Application was unanimously approved by the San Ramon Planning Commission on November 15, 2022. City of San Ramon, Minutes San Ramon Planning Commission, November 15, 2022, http://sanramonca.iqm2.com/Citizens/FileView.aspx?Type=12&ID=2644 .

[52] California Office of Historic Preservation, *Instructions for Recording Historical Resources*, Sacramento, 1995.

development facilitated by the 2040 General Plan has the potential to impair historical built-environment resources. Consequently, damage to or destruction of historical resources could occur as a result of development under the proposed 2040 General Plan. In order to assess impacts to historical resources which occur through development under the General Plan, each project would need to be assessed as it is proposed.

Proposed 2040 General Plan Guiding Policy 8.7-G-1 – Archaeological, Paleontological, and Historic Resources and Guiding Policy 6.5-G-1 Parkland Needs and Proposed Park and their associated implementing policies, listed below, would reduce potential impacts related to historical resources.

Guiding Policy 8.7-G-1: Identify, evaluate, and preserve the archaeological, paleontological, and historic resources that are within the San Ramon Planning Area.

Policy 8.7-I-2 Prepare Historical Resources Evaluations for projects involving structures 45 years or folder and implement mitigation prior to and during construction.

Policy 8.7-1-4 Protect and maintain the integrity of officially listed historic resources.

Policy 8.7-I-5 Review any proposals to nominate resources for eligibility for listing on national or state historic registers. Discretion should be used in reviewing such nominations to ensure that resources have significant historic value and have been appropriately evaluated.

Guiding Policy 6.5-G-1: Create and maintain a high-quality publicly accessible park and trail system for San Ramon.

Policy 6.5-I-11 Seek partnership opportunities with the private sector and with other public agencies to enhance park facilities and provide recreational activities. *In 2013, the Parks Community Services Department established a Partnership Program to provide the private sector with various levels of sponsorship opportunities for City events, facilities, and programs. Where possible, seek out partnerships with the private sector and/or local historic preservation groups, such as the San Ramon Historic Foundation, to fund and facilitate the preserve local historic resources that are of value to the community.*

Policy 6.5-I-12 Identify, document and seek to preserve and protect sites of historic interest.

The guiding policies and implementing policies listed above would reduce the potential for historical resources to be adversely impacted from the development facilitated by the 2040 General Plan, but there would still be potential for development to impact historical resources. Implementation of Mitigation Measure CR-1 would reduce impacts to historical resources by identifying and evaluating qualifying historical resources and managing relocation, rehabilitation, or alteration in compliance with the Standards as applicable. Therefore, construction 2040 General Plan impacts related to historical resources would be less than significant with mitigation.

Operation

Given that impacts to historical resources occur during construction, there would be no 2040 General Plan operational impact related to historical resources.

Mitigation Measures

MITIGATION MEASURE CR-1: PREPARE A HISTORICAL RESOURCES EVALUATION PRIOR TO APPROVAL FOR PROJECTS INVOLVING BUILDINGS 45 YEARS OR OLDER AND IMPLEMENT MITIGATION PRIOR TO AND DURING CONSTRUCTION

A historic resources evaluation for projects involving buildings 45 years or older shall be prepared as follows:

- All properties 45 years of age or older as deemed appropriate by the San Ramon Community Development Director shall be evaluated within their historic context and documented in a report meeting the State Office of Historic Preservation guidelines. The evaluation shall be prepared by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualifications Standards in architectural history or history (as defined in Code of Federal Regulations, Title 36, Part 61). The qualified architectural historian or historian shall conduct an intensive-level evaluation in accordance with the guidelines and best practices promulgated by the State Office of Historic Preservation to identify potential historical resources within the proposed development site. Such evaluated properties shall be documented on Department of Parks and Recreation Series 523 Forms. The report shall be submitted to the City for review and concurrence. If the property is already listed in the NRHP or CRHR, the historical resources evaluation described above shall not be required.
- If historical resources are identified within the site of a proposed development, efforts shall be made to the extent feasible to ensure that impacts are mitigated. Application of mitigation shall generally be overseen by a qualified architectural historian or historic architect meeting the Professional Qualification Standards, unless unnecessary in the circumstances (e.g., preservation in place). In conjunction with a development application that may affect the historical resource, the historical resources evaluation report shall also identify and specify the treatment of character-defining features and construction activities.
- Efforts shall be made to the greatest extent feasible to ensure that the relocation, rehabilitation, or alteration of the resource is consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. Application of the Standards shall be overseen by a qualified architectural historian or historic architect meeting the Professional Qualification Standards. In conjunction with a development application that may affect the historical resource, a report identifying and specifying the treatment of character-defining features and construction activities shall be provided to the City for review and concurrence. As applicable, the report shall demonstrate how a project complies with the Standards and be submitted to the City for review and approval prior to the issuance of permits.
- If significant historical resources are identified on a development site and compliance with the Standards and or avoidance is not possible, appropriate site-specific mitigation measures shall be established and undertaken. Mitigation measures may include documentation of the historical resource in the form of a Historic American Building Survey (HABS) report, or equivalent. The report shall comply with the Secretary of the Interior's Standards for Architectural and Engineering Documentation and shall generally follow the HABS Level III requirements, including digital photographic recordation, detailed historic narrative report, and compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the Professional Qualification Standards and

submitted to the City prior to issuance of any permits for demolition or alteration of the historical resource.

Level of Significance

Less than significant with mitigation

Archaeological Resources

Significance Criterion b:	Would the proposed plan cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Impact CR-2 THE 2040 GENERAL PLAN HAS THE POTENTIAL TO RESULT IN SIGNIFICANT IMPACTS IF DEVELOPMENT CARRIED OUT UNDER THE PLAN WOULD CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF AN ARCHAEOLOGICAL RESOURCE, INCLUDING THOSE THAT QUALIFY AS HISTORICAL RESOURCES. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Construction

It is presumed that archaeological resources that are eligible for inclusion in the NRHP or CRHR exist throughout San Ramon (i.e., the General Plan area). Effects on archaeological resources are only known once a specific development has been proposed because the effects are highly dependent on both the individual development site conditions and the characteristics of the proposed ground-disturbing activity. Ground-disturbing activities associated with development facilitated by the 2040 General Plan, particularly in areas that have not been studied through a cultural resources investigation, or when excavation depths exceed those previously attained, have the potential to damage or destroy previously-unknown historic or prehistoric archaeological resources that may be present on or below the ground surface. Impacts to archaeological resources are especially likely in instances where ground disturbance will occur in native soils, in historic-age fill of unknown origin, and in areas that were developed prior to the implementation of a Citywide sewer system and trash collection service. Consequently, damage to or destruction of cultural resources could occur as a result of development under the proposed 2040 General Plan. In order to ensure that development within San Ramon does not have a detrimental effect on archaeological resources, each future project would need to be assessed once the project location and design concept is available.

Although there are no specific development projects associated with the 2040 General Plan, implementation of the plan would guide development in San Ramon through the year 2040. New residential, commercial, office, institutional, and industrial land uses would be implemented via new development and the conversion of existing properties to new uses. Potential future development occurring under the 2040 General Plan may include site preparation, demolition and construction activities.

Proposed 2040 General Plan Open Space and Conservation Element Guiding Policy 8.7-G-1–Archaeological, Paleontological, and Historic Resources and Parks and Recreation Element Guiding Policy 6.5-G-1–Parkland Needs and Proposed Park and their associated implementing policies, listed below, would reduce potential impacts related to archaeological resources, whether prehistoric or historic in nature.

Guiding Policy 8.7-G-1: Identify, evaluate, and preserve the archaeological, paleontological, and historic resources that are found within the San Ramon Planning Area.

Policy 8.7-1.3 Conduct Archaeological Resources Assessment prior to project approval and implement identified mitigation prior to and during construction and include a policy to stop work in the event of unanticipated cultural resources discoveries during construction.

Policy 8.7-1-4 Protect and maintain the integrity of officially listed historic resources.

Guiding Policy 6.5-G-1: Create and maintain a high-quality publicly accessible park and trail system for San Ramon.

Policy 6.5-I-12 Identify, document and seek to preserve and protect sites of historic interest.

The guiding policies and implementing policies listed above would help reduce the potential for archaeological resources to be adversely impacted by the ground-disturbing activities associated with the development facilitated by the 2040 General Plan. However, there would still be potential for development to impact archaeological resources, and those impacts would be potentially significant. However, implementation of Mitigation Measures CR-2 and CR-3 (evaluate and protect significant archaeological resources if encountered during construction associated with development under the 2040 General Plan), would reduce 2040 General Plan construction impacts related to archeological resources to less than significant with mitigation.

Operation

Given that potential impacts to archaeological resources would occur during construction, there would be no 2040 General Plan operational impact related to archaeological resources.

Mitigation Measures

MITIGATION MEASURE CR-2: PREPARE AN ARCHAEOLOGICAL RESOURCES ASSESSMENT PRIOR TO PROJECT APPROVAL AND IMPLEMENT MITIGATION PRIOR TO AND DURING CONSTRUCTION

An archaeological resources assessment for projects involving ground disturbance shall be prepared as follows:

- Assessments shall include a California Historical Resources Information System records search at the Northwest Information Center (NAHC) and a Sacred Lands File search maintained by the Native American Heritage Commission. The records searches will characterize the results of previous cultural resource surveys and disclose any cultural resources that have been recorded and/or evaluated in and around a project site. A Phase I pedestrian survey shall be undertaken at a project site that is on previously undeveloped land in order to locate any surface cultural materials. By performing a records search, consultation with the NAHC, and a Phase I survey, a qualified archaeologist shall be able to classify a project site as having high, medium, or low sensitivity for archaeological resources.
- If the Phase I archaeological survey identifies resources that may be affected by a project, the archaeological resources assessment shall also include Phase II testing and evaluation. If resources are determined significant or unique through Phase II testing and site avoidance is not possible, appropriate site-specific mitigation measures shall be identified in the Phase II evaluation. These measures shall include, but would not be limited to, a Phase III data recovery

program, avoidance, or other appropriate actions to be determined by a qualified archaeologist in consultation with the City and any interested Tribes, as stated in the 2040 General Plan Tribal Consultation Implementation Program outlined by Guiding Policy ENV-5 and Guiding Policy 8.7-G-1. If significant archaeological resources cannot be avoided, impacts may be reduced to less-than-significant levels by adding fill soils on top of the sites rather than cutting into cultural deposits. Alternatively, and/or in addition, a data collection program may be warranted, including mapping the location of artifacts, surface collection of artifacts, or excavation of the cultural deposit to characterize the nature of the buried portions of sites. Curation of the excavated artifacts or samples shall occur as specified by the archaeologist in consultation with the City and any interested Tribes. As stated in the 2040 General Plan Tribal Consultation Implementation Program outlined by Guiding Policy ENV-5 and Guiding Policy 8.7-G-1, the final disposition of artifacts not directly associated with Native American graves shall be negotiated during consultation with interested tribes. If Native American tribes do not accept the artifact, it shall be offered to an institution staffed by qualified professionals, as determined by the City Planner. Artifacts include material recovered from all phases of work, including the initial survey, testing, indexing, data recovery, and monitoring.

MITIGATION MEASURE CR-3: STOP WORK IN THE EVENT OF UNANTICIPATED CULTURAL RESOURCES DISCOVERIES DURING CONSTRUCTION

If cultural resources are encountered during ground-disturbing activities for a project, work in the immediate area shall be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology in either prehistoric or historic archaeology shall be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by a project, additional work such as excavating the cultural deposit to fully characterize its extent, and collecting and curating artifacts may be warranted to mitigate any significant impacts to cultural resources. In the event that archaeological resources of Native American origin are identified during project construction, a qualified archaeologist will consult with the City to begin Native American consultation procedures.

Level of Significance

Less than significant with mitigation

Disturbance of Human Remains

Significance Criterion c:	Would the proposed plan disturb any human remains, including those interred outside of formal cemeteries?

Impact CR-3 THE DISCOVERY OF HUMAN REMAINS IS ALWAYS A POSSIBILITY DURING GROUND-DISTURBING ACTIVITIES. GROUND DISTURBANCE ASSOCIATED WITH DEVELOPMENT CARRIED OUT UNDER THE 2040 GENERAL PLAN MAY DISTURB OR DAMAGE KNOWN OR UNKNOWN HUMAN REMAINS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT WITH ADHERENCE TO EXISTING REGULATIONS.

Construction

Human burials outside of formal cemeteries can occur in prehistoric archaeological contexts. Excavations during construction activities could have the potential to disturb these resources that could include Native American burial sites. As such, ground disturbing activities that may occur

within San Ramon (the General Plan area) during implementation of the 2040 General Plan have the potential to unearth previously unidentified human remains.

Human burials, in addition to being potential archaeological resources, have specific provisions for treatment in PRC Section 5097. The California Health and Safety Code (Section 7050.5, 7051, and 7054) has specific provisions for the protection of human burial remains. Existing regulations address the illegality of interfering with human burial remains, and protect them from disturbance, vandalism, or destruction. They also include established procedures to be implemented if Native American skeletal remains are discovered. PRC Section 5097.98 also addresses the disposition of Native American burials, protects such remains, and established the NAHC to resolve any related disputes.

All development projects are also subject to State of California Health and Safety Code Section 7050.5, which states that, if human remains are unearthed, no further disturbance can occur until the county coroner has made the necessary findings as to the origin and disposition of the remains pursuant to the PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the NAHC, which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site and make recommendations to the landowner within 48 hours of being granted access.

Proposed 2040 General Plan Open Space and Conservation Element Guiding Policy 8.7-G-1– Archaeological, Paleontological, and Historic Resources and its associated implementing policy, listed below, would reduce potential impacts related to human remains, whether prehistoric or historic in nature.

Guiding Policy 8.7-G-1: Identify, evaluate, and preserve the archaeological, paleontological, and historic resources that are found within the San Ramon Planning Area.

Policy 8.7-1.6 As a standard condition of approval, require all development projects involving grading and excavation to implement appropriate measures in the event that burial sites or human remains are encountered during earthwork activities.

The guiding policy and implementing policy listed above would help reduce the potential for human remains to be adversely impacted by the ground-disturbing activities associated with the development facilitated by the 2040 General Plan. As such, adherence to this guiding policy and implementing policy as well as existing regulations discussed above would reduce the potential for human remains to be adversely impacted by ground-disturbing activities associated with development facilitated by the 2040 General Plan. Therefore, 2040 General Plan construction impacts related to human remains would be less than significant.

Operation

Given that potential impacts to human remains would occur during construction, there would be no 2040 General Plan operational impact related to human remains.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Tribal Cultural Resources

Significance Criterion d:	Would the proposed plan cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is either 1) listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k) or 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 Public Resources Code Section 5024.1?

Impact CR-4 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN HAS THE POTENTIAL TO IMPACT UNIDENTIFIED TRIBAL CULTURAL RESOURCES. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Construction

Ground-disturbing activities associated with future development projects under the 2040 General Plan could expose previously unidentified subsurface archaeological resources that may qualify as tribal cultural resources and could be adversely affected by associated project construction.

The 2040 General Plan is a high-level planning document, and it remains a possibility that tribal cultural resources may be present within San Ramon (the General Plan area). AB 52 and SB 18 tribal consultation, thus far, has not identified known tribal cultural resources in the General Plan area, and the SLF results received from the NAHC were negative for Sacred Lands. Adherence to the requirements of AB 52 would require tribal consultation with local California Native American Tribes prior to implementation of any future project activities that are subject to CEQA. In compliance with AB 52, a determination of whether project-specific substantial adverse effects on tribal cultural resources would occur along with identification of appropriate project-specific avoidance, minimization, or mitigation measures would be required. Future projects facilitated by the 2040 General Plan that are not subject to AB 52 shall adhere to the General Plan policies listed below, which include tribal monitoring and consultation.

Proposed 2040 General Plan Open Space and Conservation Element Guiding Policy 8.7-G-1– Archaeological, Paleontological, and Historic Resources and its associated implementing policies, listed below, would reduce potential impacts related to tribal cultural resources.

Guiding Policy 8.7-G-1: Identify, evaluate, and preserve the archaeological, paleontological, and historic resources that are found within the San Ramon Planning Area.

Policy 8.7-1.7 Perform required consultation with the appropriate tribal organization(s) as part of projects subject to the California Environmental Quality Act (CEQA). For projects involving a General Plan Amendment, the development of a Specific Plan (or amendment), or designating open space, provide for tribal consultation opportunities in accordance with state law.

Policy 8.7-1.8 Require tribal monitor(s) during all activities in areas with cultural resources of interest to local Native American tribes when requested. Cultural resources may include a sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine. Both monitors shall observe grading, ground-disturbing, and other earth-moving activities.

The guiding policy and implementing policies listed above would help reduce the potential for tribal cultural resources to be adversely impacted by the ground-disturbing activities associated with the development facilitated by the 2040 General Plan. However, there would still be potential for development to affect tribal cultural resources, and those impacts would be potentially significant. However, implementation of Mitigation Measure CR-4 (suspend work around tribal cultural resources identified during construction) would reduce 2040 General Plan construction impacts related to archeological resources to less than significant with mitigation.

Operation

Given that impacts to tribal cultural resources occur during construction, there would be no 2040 General Plan operational impacts related to tribal cultural resources.

Mitigation Measures

MITIGATION MEASURE CR-4: SUSPEND WORK AROUND TRIBAL CULTURAL RESOURCES IDENTIFIED DURING CONSTRUCTION

In the event that cultural resources of Native American origin are identified during construction of a project implemented under the 2040 General Plan, all earth-disturbing work in the vicinity of the find shall be temporarily suspended or redirected until an archaeologist has evaluated the nature and significance of the find as a cultural resource and an appropriate local Native American representative is consulted. If the City, in consultation with local Native Americans, determines that the resource is a tribal cultural resource and, thus, significant under CEQA, a mitigation plan shall be prepared and implemented in accordance with State guidelines and in consultation with local Native American group(s). The mitigation plan shall include avoidance of the resource or, if avoidance of the resource is infeasible, the plan shall outline the appropriate treatment of the resource in coordination with the appropriate local Native American tribal representative and, if applicable, a qualified archaeologist. Examples of appropriate mitigation for tribal cultural resources include, but are not limited to, protecting the cultural character and integrity of the resource, protecting traditional use of the resource, protecting the confidentiality of the resource, or heritage recovery.

Level of Significance

Less than significant with mitigation

3.4.5 Cumulative Impacts

The geographic scope of the cumulative cultural and tribal cultural resources analysis is the General Plan area and the adjacent areas. The cumulative analysis considers the nearby past, present, and reasonably foreseeable future plans and projects listed in Table 3-1 (refer to Chapter 3, *Environmental Impact Analysis*) located in Danville and unincorporated Contra Costa County in addition to the proposed plan.

Historical Resources

The combination of the proposed plan as well as other relevant plans and larger scale projects considered with the proposed plan (see Table 3-1) could potentially involve the cumulative demolition or alteration of historical resources. Although Mitigation Measure CR-1 would be required to reduce impacts to these resources to the maximum extent feasible, cumulative

development could nonetheless cause the loss of built-environment historical resources. Therefore, the cumulative impact related to historical resources would be less than significant with mitigation.

Archaeological and Tribal Cultural Resources

Development facilitated by the 2040 General Plan in conjunction with other nearby past, present and reasonably foreseeable future projects listed in Table 3-1 could potentially disturb areas that may contain archaeological and tribal cultural resources. While there is the potential for significant cumulative impacts to archaeological and tribal cultural resources, it is anticipated that potential impacts associated with individual cumulative projects would be addressed and mitigated on a case-by-case basis and would be subject to local and State regulations regarding the protection of such resources. Therefore, the cumulative impact related to archaeological and tribal cultural resources would be less than significant with mitigation.

Overall Level of Cumulative Significance

Less than significant with mitigation

3.5 Geology, Soils, and Mineral Resources

3.5.1 Introduction

This section describes the existing geology, soils, and mineral resources in the region and General Plan area, as well as the relevant regulatory framework. This section also analyzes the possible impacts related to geology, soil, and mineral resources that could result from implementation of the proposed plan. Information in this section is based on review of the existing 2035 San Ramon General Plan, the United States Geological Survey (USGS), and California Geological Survey, the University of California Museum of Paleontology database, Paleobiology Database, primary scientific literature, and available information from the City of San Ramon.

3.5.2 Environmental Setting

Geologic Setting

Contra Costa County

San Ramon is located in Contra Costa County. The western and southern portions of Contra Costa County, including San Ramon, lie in the Coast Ranges geomorphic province.[1] The Coast Ranges extend along the majority of California's coast from the California-Oregon border to Point Arguello in Santa Barbara County in the south and consist of northwest-trending mountain ranges and valleys. The Coast Ranges are composed of Mesozoic and Cenozoic sedimentary, igneous, and metamorphic strata. The eastern side is characterized by strike-ridges and valleys in the upper Mesozoic strata.[1]

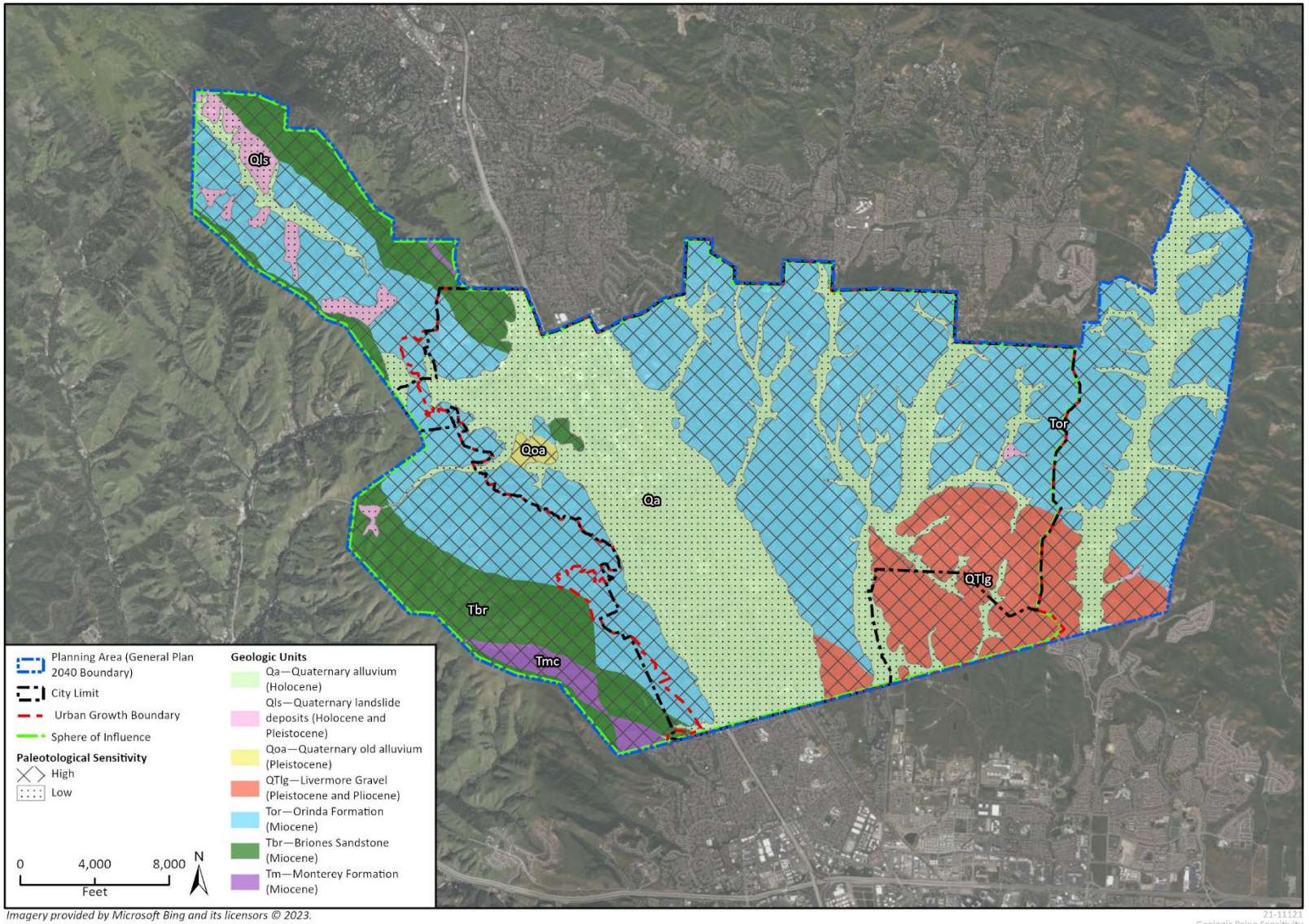
San Ramon is located in part of the San Ramon Valley, a northwest-southeast-trending valley within the Diablo Range. San Ramon is also located in part of the Diablo Range which has elevations ranging between 3,000 and 4,000 feet[2] including the Dougherty Hills and Shelburne Hills, to the west and east of the San Ramon Valley. Sycamore Creek and San Ramon Creek are the principal streams flowing over the San Ramon Valley Groundwater Basin. Groundwater-bearing, alluvial deposits comprise the entire floor of San Ramon Valley and portions of the upland areas on all sides of the valley.[3] Within San Ramon, portions of the 100-year floodplain are along San Ramon Creek, South San Ramon Creek, West Branch Alamo Creek, and Alamo Creek. Portions of the 500-year floodplain are along South San Ramon Creek, which is entirely modified for flood control purposes.[4]

General Plan Area

As shown on Figure 3.5-1, the General Plan area is underlain by various geologic units consisting of a series of tectonically folded, tilted, and faulted, sedimentary rocks of Holocene, Pleistocene, and Miocene age. The paleontological sensitivity of these geologic units is also identified on Figure 3.5-1 and discussed in further detail later in this section.

[1] California Geological Survey. 2002. Note 36 – California Geomorphic Provinces. https://www.conservation.ca.gov/cgs/Documents/CGS-Note-36.pdf
[2] Encyclopedia Britannica. 2023. Diablo Range. https://www.britannica.com/place/North-America/Tectonic-evolution (accessed June 2023).
[3] DWR. 2004. California's Groundwater Bulletin 118. San Francisco Bay Hydrologic Region – San Ramon Valley Groundwater Basin. Updated February 27. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/2_007_SanRamonValley.pdf (April 2023).
[4] FEMA. 2023. FEMA Flood Map Service Center. https://msc.fema.gov/portal/search?#searchresultsanchor (April 2023).

Figure 3.5-1 Geologic Units and Paleontological Sensitivity of General Plan Plan Area



Existing Soils

Soil Types and Properties

Corrosive soils are a geologic hazard, because they react with concrete and ferrous metals, which can cause damage to foundations and buried pipelines. Expansive soils are a geologic hazard, because an increase in soil volume can exert forces on structures and, thus, damage building foundations, walls, and floors. In general, areas are susceptible to differential settlement if underlain by compressible sediments, such as poorly engineered artificial fill or loose unconsolidated alluvial sediments. When these soils dry out and shrink, structural damage can occur.

General Plan Area

As shown on Figure 3.5-2, the eastern portion of the General Plan area has soils that are highly expansive. The area east of I-680 abutting the highway is also highly expansive, but further east from the highway soils are considered to be less expansive.[5]

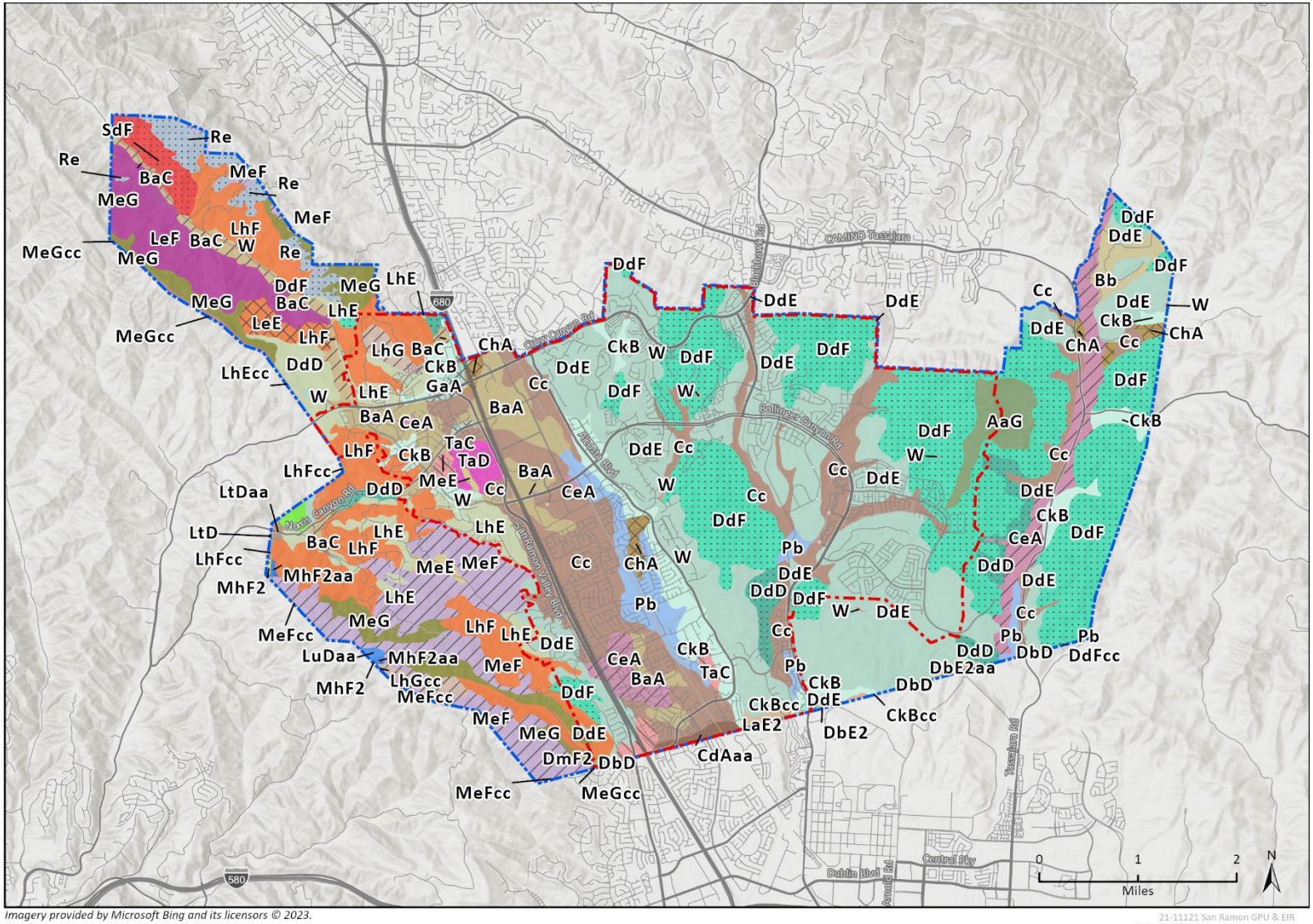
Seismicity

Seismic-related Hazard Types

The term seismicity describes the effects of seismic waves that are radiated from an earthquake fault in motion. While most of the energy released during an earthquake result in the permanent displacement of the ground, as much as 10 percent of the energy may dissipate immediately in the form of seismic waves. Seismicity can result in seismic-related hazards such as fault rupture, ground shaking, and liquefaction. Faults form in rocks when stresses overcome the internal strength of the rock, and fault rupture occurs when movement on a fault breaks through to the surface and can result in damage to infrastructure and persons. Ground movement during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geologic material. The composition of underlying soils, even those relatively distant from faults, can intensify ground shaking. Strong ground shaking from an earthquake can result in damage, with buildings shifted off their foundations and underground pipes being broken. Liquefaction occurs when an earthquake causes ground shaking that result in saturated soil losing shear strength, deforming, and acting like a liquid. When liquefaction occurs, it can result in ground failure that can result in damage to roads, pipelines, and buildings.

[5] United States Department of Agriculture. 2019. Natural Resources Conservation Service: Web Soil Survey. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm (accessed April 2023).

Figure 3.5-2 Soils Underlying General Plan Area



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Additional data provided by SSURGO, 2022.

21-11121 San Ramon GPU & EIR
Fig 3.5-1 Soils Underlying San Ramon 1

Imagery provided by Microsoft Bing and its licensors © 2023.
Additional data provided by SSURGO, 2022.

21-11121 San Ramon GPU & EIR
Fig 3.5-1 Soils Underlying San Ramon 2

San Francisco Bay Area

The San Francisco Bay Area contains numerous active earthquake faults. Because of the presence of nearby active faults, the San Francisco Bay Area is considered seismically active. Numerous small earthquakes occur every year in the San Francisco Bay Area, and larger earthquakes have been recorded and can be expected to occur in the future. According to the third version of Uniform California Earthquake Forecast (UCERF 3), there is an aggregated 98 percent probability of a moment magnitude 6.0 (Richter scale) or greater earthquake occurring in the plan area on an active Bay Area fault over the next 30 years.

Contra Costa County Area

Given that the San Francisco Bay Area is a region of high seismic activity, Contra Costa County has been subjected to numerous seismic events, originating both on faults within the County and in other parts of the region. Six major Bay Area earthquakes have occurred since 1800 that affected the County. These earthquakes and the originating faults include the 1836 and 1868 earthquakes on the Hayward Fault, and the 1861 earthquake on the Calaveras Fault. Two earthquakes, in 1838 and 1906, originated on the San Andreas Fault, while one earthquake (with two major shocks) occurred in 1872 and was centered in the Vacaville-Winters area of Solano County. These latter events likely occurred on a thrust fault and are not known to have been accompanied by surface fault rupture. A smaller earthquake, centered near Collinsville in Solano County on a fault of uncertain identity, occurred in 1889. The Loma Prieta earthquake, of 6.9 magnitude[6], occurred in October 1989. The epicenter of which was located on the San Andrea fault roughly 56 miles south of San Francisco, 10 miles northeast of Santa Cruz, near Mt. Loma Prieta in the Santa Cruz Mountains.

Using the available data and information, an earthquake probability estimate has been developed for Contra Costa County and is shown in Table 3.5-1.

Table 3.5-1 Approximate Probability of Occurrence of Earthquake on Bay Area Faults

Causative Fault	Magnitude	Approximate Probability of Occurrence (over a 50-year period)
San Andreas	7.0–8.0	Likely[1]
	8.0–8.5	Intermediate[2]
Hayward	6.0–7.0	Likely
	7.0–7.5	Intermediate
Calaveras	6.0–7.0	Likely
	7.0–7.5	Intermediate-Low[3]
Concord	5.0–6.0	Likely
	6.0–7.0	Intermediate-Low
Antioch	5.0–6.0	Likely
	6.0–7.0	Intermediate-Low

Notes:
[1] Greater than 50 percent probability of occurrence
[2] A 15-50 percent probability of occurrence
[3] Less than 15 percent probability of occurrence
Source: USGS 2008

[6] California Geological Survey (CGS). 2019. The 1989 Loma Prieta Earthquake. https://www.conservation.ca.gov/cgs/earthquakes/loma-prieta (accessed March 2023).

General Plan Area

Like most cities in the region, San Ramon is subject to risks associated with potentially destructive earthquakes. Earthquakes are most common along geologic faults that are planes of weakness or fractures along which rocks have been displaced. The Calaveras Fault is a major fault that extends in a north to south direction in the area west of Interstate 680 within San Ramon. The Pleasanton Fault also extends in a north to south direction in the area east of Interstate 680 within San Ramon. The Sherburne Hills thrust fault and the Mount Diablo thrust fault are also located in the eastern portion of San Ramon. Faults within and near the General Plan area are shown in Figure 3.5-3.

Seismic Hazards and Areas

Surface Rupture

HAZARD CHARACTERISTICS

Surface rupture represents the breakage of ground along the surface trace of a fault, which is caused by the intersection of the fault surface area ruptured in an earthquake with the earth's surface. Fault displacement occurs when material on one side of a fault moves relative to the material on the other side of the fault. This can have particularly adverse consequences when buildings are located within the rupture zone. It is not feasible, from a structural or economic perspective, to design and build structures that can accommodate rapid displacement involved with surface rupture. Amounts of surface displacement can range from a few inches to tens of feet during a rupture event.

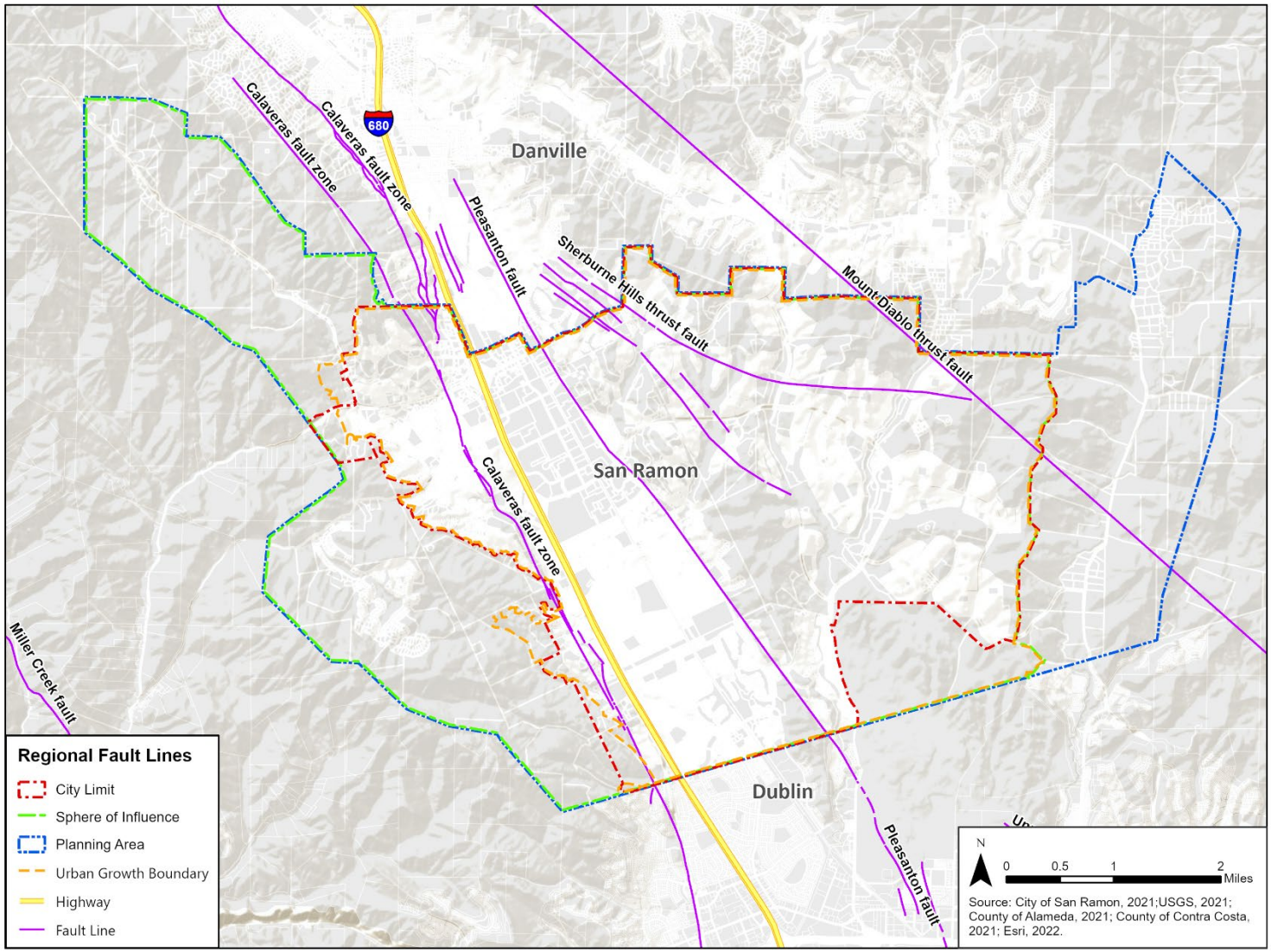
Faults are geologic hazards due to the potential for both surface fault displacement and seismic ground shaking that are distinct but related properties. Surface fault displacement results when the fault plane ruptures and that rupture surface extends to, or intersects, the ground surface. Surface fault rupture can be very destructive to structures constructed across active faults. However, the zone of damage is limited to a relatively narrow area along either side of the fault as opposed to seismic ground shaking damage that can be quite widespread. Faults are categorized as active, potentially active, and inactive. A fault is classified as active if it has moved during the Holocene time, which consists of approximately the last 11,000 years. A fault is classified as potentially active if it has experienced movement within Quaternary time, which is during the last 1.8 million years. Faults that have not moved in the last 1.8 million years are generally considered inactive.

GENERAL PLAN AREA

Within the General Plan area, the Calaveras and the Pleasanton fault lines would have potential for surface rupture according to the United States Geological Survey.[7]

[7] California Geological Survey. 2021.Earthquake Zones of Required Investigation [map]. https://maps.conservation.ca.gov/cgs/EQZApp/app/ (accessed April 2023)

Figure 3.5-3 Faults Within and Near the General Plan Area



Ground Shaking

HAZARD CHARACTERISTICS

In addition to surface rupture, the major cause of structural damage from earthquakes is ground shaking. The intensity of ground motion expected at a particular site depends upon the magnitude of the earthquake, the distance to the epicenter, and the geology of the area between the epicenter and the property. Greater movement can be expected at sites located on poorly consolidated material, such as alluvium, within close proximity to the ruptured fault, or in response to a seismic event of great magnitude.

GENERAL PLAN AREA

San Ramon (i.e., the General Plan area) has been impacted by ground shaking during major earthquakes in the seismically active San Francisco Bay Area region and is likely to experience ground shaking from major earthquakes in the future. Due to the location of several faults within San Ramon, the Association of Bay Area Governments (ABAG) Resiliency Program has identified the ground-shaking potential in the General Plan area as "violent" in the north to south direction on either side of I-680 and "severe" in the rest of the General Plan area. Groundshaking would be most intense resulting from an earthquake originating from any of the other nearby faults that have the potential to create significant groundshaking throughout San Ramon.[8]

Liquefaction

HAZARD CHARACTERISTICS

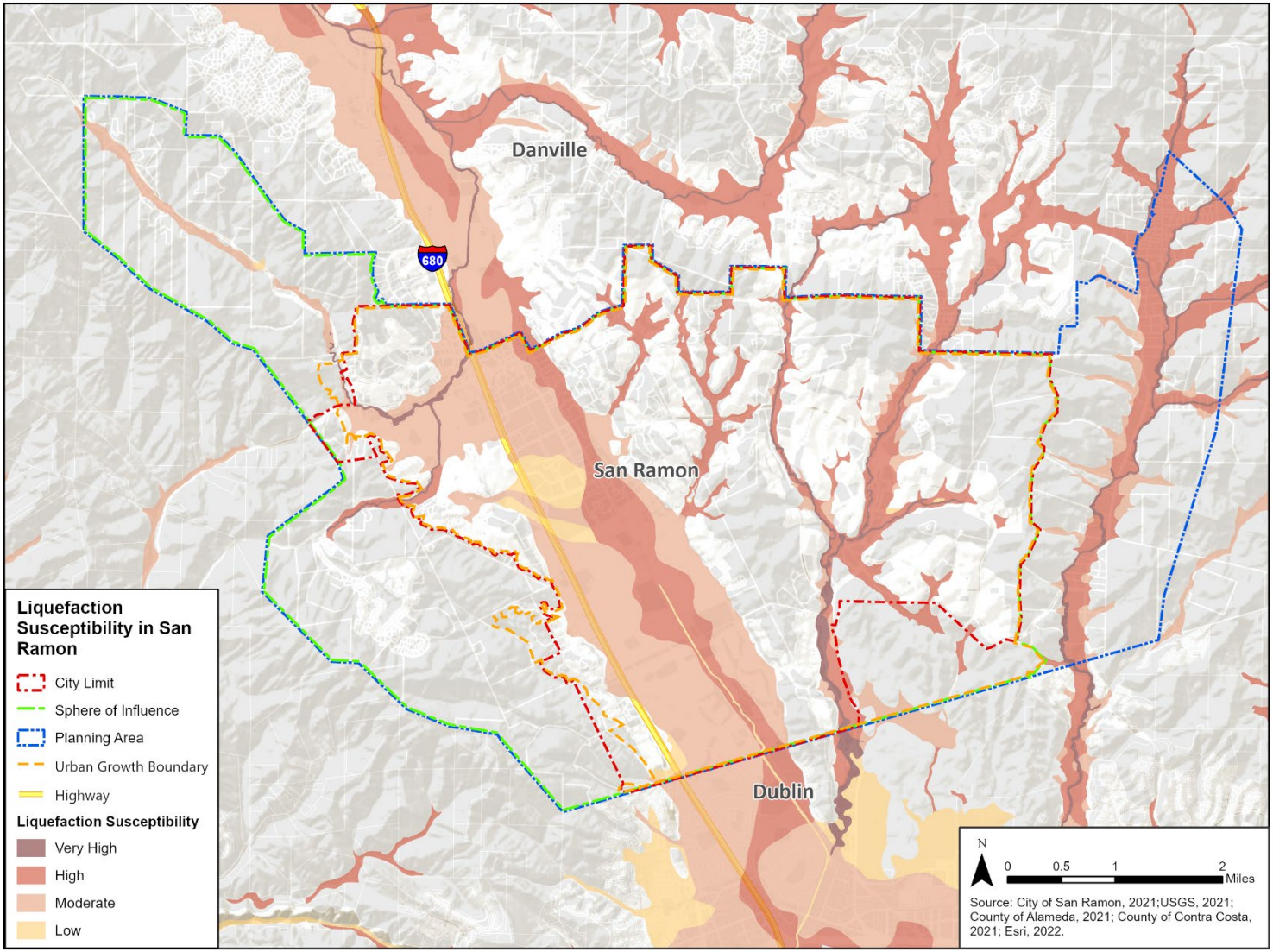
Liquefaction is a seismic phenomenon in which loose, saturated granular and non-plastic fine-grained soils lose their structure/strength when subjected to high-intensity ground shaking. Liquefaction occurs when three general conditions exist: 1) shallow groundwater within the top 50 feet of the ground surface; 2) low-density non-plastic soils; and 3) high-intensity ground motion.

GENERAL PLAN AREA

San Ramon (i.e., the General Plan area) has been identified to have a moderate to high potential for liquefaction. The areas of San Ramon directly parallel to the I-680 corridor are most susceptible to liquefaction.[9] Figure 3.5-4 depicts the liquefaction potential of the General Plan area.

[8] Association of Bay Area Governments (ABAG). 2021. MTC/ABAG Hazard Viewer Map [map]. https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8 (accessed April 2023)
[9] San Ramon, City of. 2022. Existing Conditions and Trends Workbook. https://plansanramon.com/images/SRGPU_ECTW_Reduced_2022_03_03_MG.pdf (accessed April 2023)

Figure 3.5-4 Liquefaction Potential within the General Plan Area



Landslides and Slope Stability

HAZARD CHARACTERISTICS

Seismic ground shaking can also result in landslides and other slope instability issues. Landslides occur when slopes become unstable and masses of earth material move downslope. Landslides are usually rapid events, often triggered during periods of rainfall or by earthquakes. Mudslides and slumps are a more-shallow type of slope failure. They typically affect the upper surficial soil horizons rather than bedrock features. Usually, mudslides and slumps occur during or soon after periods of rainfall, but they can be triggered by seismic shaking. The areas most susceptible to landslides are shown on maps prepared by the California Division of Mines and Geology. In addition, landslides occur where faults have fractured rock and along the base of slopes or cliffs where supporting material has been removed by stream or wave erosion, or human activities. Heavy rainfall, human actions, or earthquakes can trigger landslides. They may take the form of a slow continuous movement such as a slump or may move very rapidly as a semi-liquid mass such as a debris flow or avalanche.

GENERAL PLAN AREA

The western and eastern portions of San Ramon (i.e., the General Plan area) are identified within the ABAG Resilience Program and the California Geological Survey (CGS) as having the potential for landslide hazards.[10,11] Figure 3.5-5 depicts the landslide susceptibility within the General Plan area.

Subsidence

HAZARD CHARACTERISTICS

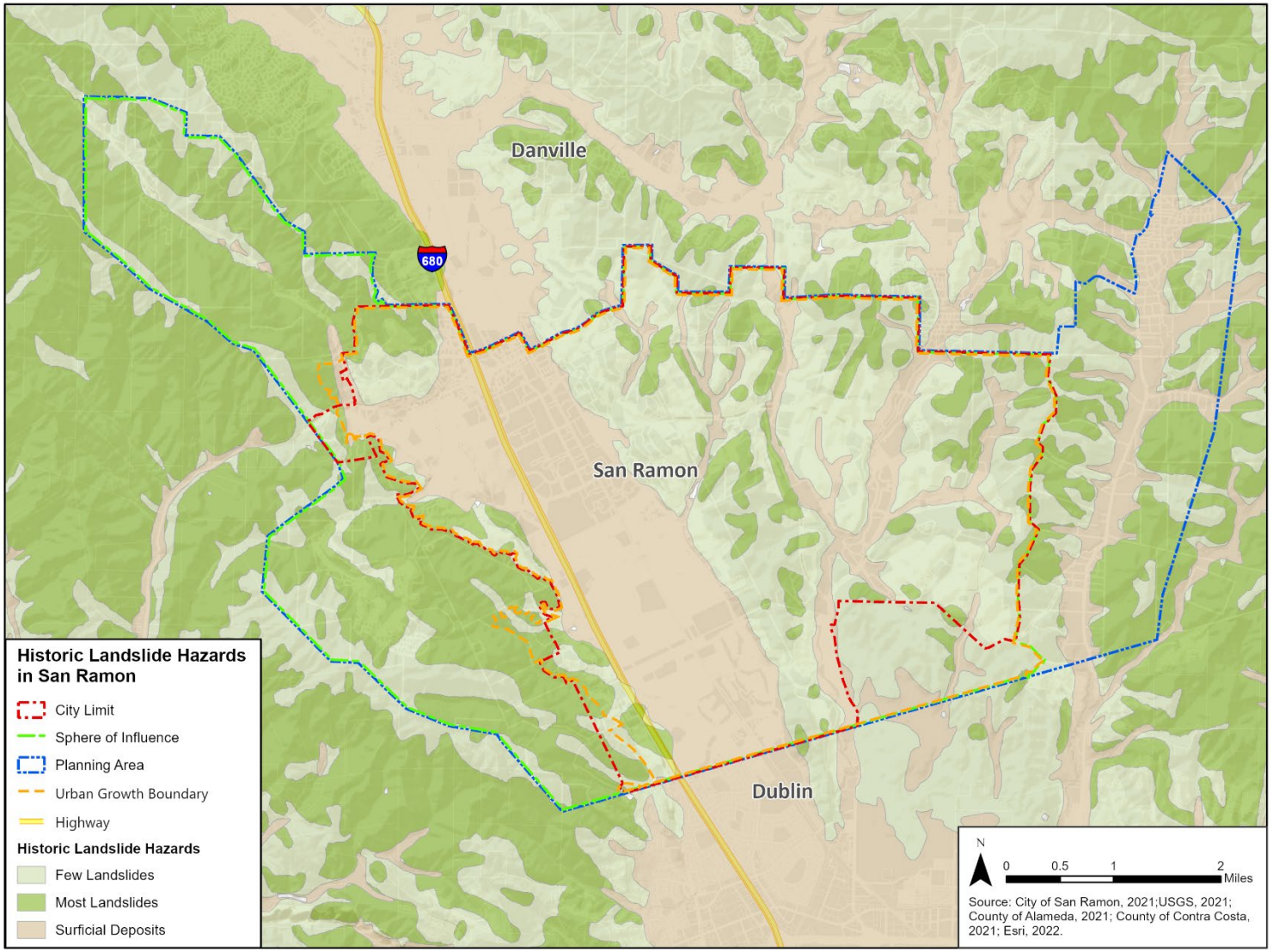
Subsidence or settlement can occur from immediate settlement, consolidation, shrinkage of expansive soil, and liquefaction. Immediate settlement occurs when a load from a structure or placement of new fill material is applied, causing distortion in the underlying materials. This settlement occurs quickly and is typically complete after placement of the final load. Consolidation settlement occurs in saturated clay from the volume change caused by squeezing out water from the pore spaces. Consolidation occurs over a period of time and is followed by secondary compression, which is a continued change in void ratio under the continued application of the load. Soils tend to settle at different rates and by varying amounts depending on the load weight or changes in properties over an area, which is referred to as differential settlement. Areas underlain by soft sediments or undocumented fills are most prone to settlement.

GENERAL PLAN AREA

Within San Ramon (i.e., General Plan area), areas where expansive soils (see Figure 3.5-2) are located may experience subsidence. When fill or structure loads are placed on these muds for development, flood control, or other purposes, settlement can result.

[10] Association of Bay Area Governments (ABAG). 2021. MTC/ABAG Hazard Viewer Map [map]. https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8 (accessed April 2023)
[11] CGS. 2011. US Landslide Inventory. https://maps.conservation.ca.gov/cgs/DataViewer/ (accessed April 2023)

Figure 3.5-5 Landslide Suseptibility in the General Plan Area



Slope Disturbance

Disturbance Characteristics

Slope disturbance from long-term geologic cycle of uplift, mass wasting, intense precipitation or wind, and gravity can result in slope failure in the form of mudslides and rock fall. Mass wasting refers to a variety of erosional processes from gradual downhill soil creep to mudslides, debris flows, landslides, and rock fall—processes that are commonly triggered by intense precipitation or wind, which varies according to climactic shifts. Often, various forms of mass wasting are grouped together as landslides, which are generally used to describe the downhill movement of rock and soil. Soil creep is a long-term, gradual downhill migration of soil under the influence of gravity and is generally on the order of a fraction of an inch per year. These soils can creep away downslope sides of foundations and reduce lateral support.

General Plan Area

San Ramon (i.e., the General Plan area) does contain active faults that could cause geologic uplifting. According to the Landslide Susceptibility Zones figure in the Contra Costa County Hazard Mitigation Plan, the western and eastern portions of San Ramon are located in an area designated as having a "moderate" to "high" risk for landslides (See Figure 3.5-5). The western and eastern portions of San Ramon (i.e., the General Plan area) are identified within the ABAG Resilience Program and the California Geological Survey (CGS) as having the potential for landslide hazards.[12,13]

Paleontological Resources

Definitions

PALEONTOLOGICAL RESOURCES

Paleontological resources, or fossils, are the remains and traces of prehistoric life. Fossils are typically preserved in layered sedimentary rocks and the distribution of fossils is a result of the sedimentary history of the geologic units within which they occur. Fossils occur in a non-continuous and often unpredictable distribution within some sedimentary units, and the potential for fossils to occur within sedimentary units depends on several factors. Although it is not possible to determine whether a fossil will occur in any specific location, it is possible to evaluate the potential for geologic units to occur within San Ramon.

To determine the uniqueness of a given paleontological resource, it must first be identified or recovered (i.e., salvaged). CEQA does not define "a unique paleontological resource or site." However, the Society of Vertebrate Paleontology (SVP) has defined a "significant paleontological resource" in the context of environmental review as follows:

> Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are typically older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).

[12] Association of Bay Area Governments (ABAG). 2021. MTC/ABAG Hazard Viewer Map [map]. https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8 (accessed April 2023)
[13] CGS. 2011. US Landslide Inventory. https://maps.conservation.ca.gov/cgs/DataViewer/ (accessed April 2023)

PALEONTOLOGICAL SENSITIVITY

Absent specific agency guidelines, most professional paleontologists in California adhere to guidelines set forth by the SVP[14] in "Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources." These guidelines establish detailed protocols for the assessment of the paleontological resource potential, or "sensitivity" of a project area and outline measures to follow to mitigate adverse impacts to known or unknown fossil resources during project development. Using baseline information gathered during a paleontological resource assessment, the paleontological resource potential of the geologic unit(s) or members thereof underlying a project area can be assigned to a high, undetermined, low, or no paleontological sensitivity category, as defined by SVP.[14] This criterion is based on rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. While these standards were specifically written to protect vertebrate paleontological resources, all fields of paleontology have adopted these guidelines.

Significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, rare, diagnostically important, or are common but have the potential to provide valuable scientific information for evaluating evolutionary patterns and geologic processes. New or unique specimens can provide new insights into evolutionary history; however, additional specimens of even well represented lineages can be equally important for studying evolutionary pattern and process, and evolutionary rates. Even unidentifiable material can provide useful data for dating geologic units if radiometric dating is possible. As such, common fossils, especially vertebrates, may be scientifically important, and therefore considered highly significant.

In general, for geologic units with high sensitivity, full-time monitoring is recommended during any project-related ground disturbance. For geologic units with low sensitivity, protection or salvage efforts are not required. For geologic units with undetermined sensitivity, field surveys by a qualified paleontologist are usually recommended to specifically determine the paleontological potential of the rock units present within the study area. For geologic units with no sensitivity, a paleontological monitor is not required.

Paleontological Resources Sensitivity in General Plan Area

Rincon assessed the paleontological sensitivity of each of the geologic units underlying the General Plan area according to SVP guidelines.[14] The sensitivity assignments were made based on review of primary scientific literature, geologic maps, and online fossil databases.

The General Plan area crosses the *Las Trampas Ridge*, *Diablo*, *Tassajara*, *Hayward*, *Dublin*, and *Livermore*, U.S. Geological Survey 7.5-minute topographic quadrangles.

[14] Society of Vertebrate Paleontology. 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee.

The regional geology was mapped at a scale of 1:24,000 by Dibblee and Minch,[15,16,17,18,19,20] who identified seven distinct geologic units underlying the General Plan area (Figure 3.5-1) and listed below.

- Quaternary alluvium (Qa)
- Quaternary landslide deposits (Qls)
- Quaternary older alluvium (Qoa)
- Livermore Gravel (QTlg)
- Orinda Formation (Tor)
- Briones Sandstone (Tbr)
- Monterey Formation (Tmc)

The geographic distribution, age, characteristics, and paleontological sensitivity of each geologic unit is discussed below.

QUATERNARY ALLUVIUM

Quaternary alluvium underlies large parts the plan area, along the floor of the San Ramon Valley, the Sycamore Valley, and many of the smaller drainages and canyons (Figure 3.5-1). Quaternary alluvium consists of poorly sorted, gravel, sand, and clay that is Holocene in age.[15,16,17,18,19,20] Therefore, Quaternary alluvium is likely too young (i.e., less than 5,000 years old) to preserve paleontological resources.[14] For this reason, Quaternary alluvium has low paleontological sensitivity.

QUATERNARY LANDSLIDE DEPOSITS

Quaternary landslide deposits are found in several areas in the hills west and east of the San Ramon Valley (Figure 3.5-1). Quaternary landslide deposits are unconsolidated to moderately consolidated deposits with varying compositions that depend on their source rock.[15,17,18,20] Quaternary landslide deposits represent Holocene landslides, meaning that they are likely too young to preserve paleontological resources, and their coarse-grained nature makes them unlikely to preserve biological remains.

QUATERNARY OLDER ALLUVIUM

Quaternary older alluvium underlies a small part of the General Plan area along the western edge of the San Ramon Valley (Figure 3.5-1). Quaternary older alluvium consists of tectonically undeformed gravel, sand, and silt, that is Pleistocene in age.[16] Pleistocene alluvial sediments have produced significant paleontological resources throughout Contra Costa County, such as ground sloth (*Megalonyx*, *Paramylodon*), mastodon (*Mammut*), horse (*Equus*), mammoth (*Mammuthus*),

[15] Dibblee, T.W. and J.A. Minch. 2005. Geologic map of the Las Trampas Ridge quadrangle, Contra Costa and Alameda Counties, California. [map.] Dibblee Geological Foundation. Dibblee Foundation Map DF-161, scale 1:24,000.
[16] Dibblee, T.W. and J.A. Minch. 2005. Geologic map of the Diablo quadrangle, Contra Costa and Alameda Counties, California. [map.] Dibblee Geological Foundation. Dibblee Foundation Map DF-162, scale 1:24,000.
[17] Dibblee, T.W. and J.A. Minch. 2006. Geologic map of the Tassajara quadrangle, Contra Costa and Alameda Counties, California. [map.] Dibblee Geological Foundation. Dibblee Foundation Map DF-194, scale 1:24,000.
[18] Dibblee, T.W. and J.A. Minch. 2005. Geologic map of the Hayward quadrangle, Contra Costa and Alameda Counties, California. [map.] Dibblee Geological Foundation. Dibblee Foundation Map DF-163, scale 1:24,000.
[19] Dibblee, T.W. and J.A. Minch. 2005. Geologic map of the Dublin quadrangle, Contra Costa and Alameda Counties, California. [map.] Dibblee Geological Foundation. Dibblee Foundation Map DF-164, scale 1:24,000.
[20] Dibblee, T.W. and J.A. Minch. 2006. Geologic map of the Livemore quadrangle, Contra Costa and Alameda Counties, California. [map.] Dibblee Geological Foundation. Dibblee Foundation Map DF-196, scale 1:24,000.

pronghorn (*Antilocapra*), rodents, and invertebrates.[21,22,23,24] Given this fossil-producing history, Quaternary older alluvium has high paleontological sensitivity.

LIVERMORE GRAVEL

The Livermore Gravel underlies the southeastern part of the General Plan area (Figure 3.5-1). The Livermore Gravel consists of poorly lithified, generally gray, somewhat-bedded, pebbles, gravel, sand, and clay, that is Pleistocene to Pliocene in age.[17,20] The Livermore Gravel has produced several significant fossil localities, including mammoth (*Mammuthus*), horse (*Equus*), hare (*Lepus*), and turtle fossils.[21,22,23, 24].Given this fossil-producing history, the Livermore Gravel has high paleontological sensitivity.

ORINDA FORMATION

The Orinda Formation underlies large parts of the hills to the east and west of the San Ramon Valley (Figure 3.5-1). The Orinda Formation consists of bedded or massive, pebble to boulder conglomerate, sandstone, siltstone, and mudstone.[15,16,17,18,19] The Orinda Formation has produced significant fossil localities, yielding taxa such as cats (*Barburofelis*), horses (*Hipparion*, *Pliohippus*), elephants (*Gomphotherium*), hares, tortoises, and invertebrates.[22,23, 24 ,25] Given this fossil-producing history, the Orinda Formation has high paleontological sensitivity.

BRIONES SANDSTONE

The Briones Sandstone underlies large parts of the hills west of the San Ramon Valley (Figure 3.5-1). The Briones Sandstone consists of light gray to tan, medium-grained sandstone that includes geologic units that are also known as the Neroly Sandstone, Cierbo Formation, and Hambre Formation. [15,16,18,19] The Briones Sandstone is late Miocene in age. The Briones Sandstone has produced significant fossil localities throughout the northern Coast Ranges, bearing taxa such as marine mammals (*Desmostylus*), birds, turtles, sharks, and invertebrates.[22,23,24] Given this fossil-producing history, the Briones Sandstone has high paleontological sensitivity.

MONTEREY FORMATION

The Monterey Formation underlies small parts of the hills in the northwestern and southwestern parts of the General Plan area (Figure 3.5-1). The Monterey Formation within the General Plan area consists of gray, clayey to sandy siltstone with occasional fine sandstone beds.[15,16,19] The Monterey Formation is a marine, Miocene-aged unit that is fossiliferous throughout California (including Contra Costa County), producing numerous fish (Actinopterygii, Chondrichthyes), seal (Pinnipedia), sea cow (Sirenia), whale (Cetacea), and invertebrate fossils.[22,23,26] Therefore, the Monterey Formation has high paleontological sensitivity.

[21] Jefferson, G.T. 2010. A catalogue of late Quaternary vertebrates from California. *Natural History Museum of Los Angeles County Technical Report*. Volume 7, pp. 5-172.
[22] Paleobiology Database. 2023. The Paleobiology Database, http://paleobiodb.org/ (accessed March 2023).
[23] University of California Museum of Paleontology. 2023. UCMP online database specimen search portal, http://ucmpdb.berkeley.edu/ (accessed March 2023).
[24] Stirton, R.A. 1939. Cenozoic mammal remains from the San Francisco Bay region. *University of California Publications in Geological Sciences*. Volume 24, pp. 338-409.
[25] Poust, A.W. 2017. First report of fossil turtle eggshell west of the Colorado Plateau. *Historical Biology*, Volume 29, pp. 473-479.
[26] Leslie, M.S., C.M. Peredo, and N.D. Pyenson. 2019. *Norrisanima miocaena*, a new generic name and redescription of a stem balaeonopteroid mysticete (Mammalian, Cetacea) from the MIocene of California. *PeerJ*. Volume 7, pp. e7629.

3.5.3 Regulatory Framework

Federal Regulations

National Earthquake Hazards Reduction Program

The National Earthquake Hazards Reduction Program was established by the U.S. Congress when it passed the Earthquake Hazards Reduction Act of 1977, Public Law 95-124. In establishing the National Earthquake Hazards Reduction Program, 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 National Earthquake Hazards Reduction Program agencies:

- National Institute of Standards and Technology of the Department of Commerce
- National Science Foundation
- USGS of the Department of Interior
- Federal Emergency Management Agency (FEMA) of the Department of Homeland Security

Implementation of National Earthquake Hazards Reduction Program 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.

U.S. Geological Survey Landslide Hazard Program

The USGS created the Landslide Hazard Program in the mid-1970s; the primary objective of the program is to reduce long-term losses from landslide hazards by improving our understanding of the causes of ground failure and suggesting mitigation strategies. The federal government takes the lead role in funding and conducting this research, whereas the reduction of losses due to geologic hazards is primarily a State and local responsibility. In Contra Costa County, plans and programs designed for the protection of life and property are coordinated by Contra Costa County Health Services.

Clean Water Act

Congress enacted the Clean Water Act (CWA), formerly the Federal Water Pollution Control Act of 1972, with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and non-point source discharges to

surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). NPDES permitting authority is administered by the California State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCB). The City of San Ramon is located within the San Francisco Bay RWQCB jurisdiction.

Projects that disturb more than one acre are required to obtain NPDES coverage under the California General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) describing best management practices (BMPs) the discharger would use to prevent and retain storm water runoff and to prevent soil erosion.

Society of Vertebrate Paleontology Guidelines

The SVP, a national scientific organization of professional vertebrate paleontologists, has established standard guidelines that outline acceptable professional practices in the conduct of paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, specimen preparation, analysis, and curation.[14] Most practicing professional paleontologists in the nation adhere to the SVP's assessment, mitigation, and monitoring requirements, as specifically spelled out in its standard guidelines.

State Regulations

California Code of Regulations, Title 24, Part 2 - California Building Code

The California Building Code (CBC) is contained in the California Code of Regulations, Title 24, Part 2, which is a portion of the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission, which by law is responsible for coordinating all building standards. The CBC incorporates by reference the federal Uniform Building Code with necessary California amendments. The CBC is the regulatory tool that includes building code standards to address geologic and seismic hazards. Chapter 16 of the CBC contains definitions of seismic sources and the procedure used to calculate seismic forces on structures.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 was passed into law following the destructive February 9, 1971, magnitude 6.6 San Fernando earthquake. The Act provides a mechanism for reducing losses from surface fault rupture on a Statewide basis. The intent of the Act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. This Act groups faults into categories of active, potentially active, and inactive. Historic and Holocene age faults are considered active, Late Quaternary and Quaternary age faults are considered potentially active, and pre-Quaternary age faults are considered inactive.

The Alquist-Priolo Earthquake Fault Zoning Act regulates development near the surface traces of active faults to mitigate the hazard of surface fault rupture. Essentially, this Act contains two requirements: (1) it prohibits the location of most structures for human occupancy across the trace of active faults; and (2) it establishes Earthquake Fault Zones and requires geologic/seismic studies of most proposed development within 50 feet of the zone. The Earthquake Fault Zones are delineated and defined by the State Geologist and identify areas where potential surface rupture

along a fault could occur. The nearest Alquist-Priolo Earthquake Fault Zone is located along the Calaveras Fault to the west of I-680 in the western portion of San Ramon and extends in a north to south direction.[27]

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (the Act) of 1990 was passed into law following the destructive October 17, 1989, magnitude 6.9 Loma Prieta earthquake.[28] The Act directs the CGS to delineate Seismic Hazard Zones. The purpose of the Act is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating seismic hazards, such as liquefaction, landslides, amplified ground shaking, and inundation by tsunami or seiche. Cities, counties, and State agencies are directed to use seismic hazard zone maps developed by CGS in their land-use planning and permitting processes. The Act requires that site-specific geotechnical investigations be performed prior to permitting most urban development projects within seismic hazard zones. CGS maintains these required maps.

California Public Resources Code Section 5097.5

Section 5097.5 of the Public Resources Code states:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

Here "public lands" means those owned by, or under the jurisdiction of, the State or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, public agencies are required to comply with Public Resources Code Section 5097.5 for their own activities, including construction and maintenance, and for permit actions (e.g., encroachment permits) undertaken by others.

Regional and Local Regulations

Contra Costa County Hazard Mitigation Plan

The Contra Costa County Hazard Mitigation Plan, adopted January 2018, assesses the County's vulnerabilities to various hazards and presents mitigation strategy, including goals, objectives, and actions that the County will strive to implement over the next five years. These hazards include earthquakes and landslides. The hazard mitigation plan seeks to identify opportunities for reasonable mitigation actions and sets out a five-year implementation plan.

[27] California Department of Conservation (DOC). 2022. Alquist-Priolo Fault Hazard Zones [map]. https://gis.data.ca.gov/maps/ee92a5f9f4ee4ec5aa731d3245ed9f53/explore?location=37.768174%2C-121.948141%2C12.84 (accessed April 2023)
[28] California Geological Survey (CGS). 2019. The 1989 Loma Prieta Earthquake. https://www.conservation.ca.gov/cgs/earthquakes/loma-prieta (accessed April 2023).

San Ramon Municipal Code

The City adopted the California Building Code (CBC) and included it in San Ramon Municipal Code Title C, Division C1, Chapter 1. Title C, Division C1, Chapter 8 incorporates Title 24 of the California Code of Regulations by reference, which applies to new construction and alterations within City limits. New development would be required to adhere to building code requirements and industry standard seismic safety building practices.

San Ramon Municipal Code Title C, Division C7, Grading, outlines the regulations applicable to grading activities within Pleasant Hill, including details for every stage of grading from when a permit is required to excavation and inspection. In addition, this chapter identifies erosion control measures to be implemented during grading activities.

San Ramon General Plan

The current San Ramon General Plan contains policies related to geology and soils, but they would be replaced by the proposed General Plan.

3.5.4 Impacts and Mitigation Measures

Significance Criteria

The City of San Ramon utilizes the following 2022 CEQA Guidelines Appendix G significance criteria questions related to Geology/Soils and Mineral Resources.

Would the 2040 General Plan:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    1. 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?
    2. Strong seismic ground shaking?
    3. Seismic-related ground failure, including liquefaction?
    4. 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 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?

g) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the State?

h) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

Approach to Analysis

Geology/Soils

Evaluations of potential geologic and soil impacts of the proposed plan were based on review of available documentation, including the existing (2015) San Ramon General Plan; the Contra Costa County Local Hazard Mitigation Plan; USGS "Shake Map" webpage; the United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey; the Association of Bay Area Governments (ABAG) Hazard Viewer Map Database, the California Geological Survey website, and USGS data and publications.

Paleontological Resources

Evaluations of potential paleontological impacts of the proposed plan were based on review of available documentation, including primary literature, geologic mapping, and online fossil databases available from the Paleobiology Database and the University of California Museum of Paleontology.

Mineral Resources

Evaluations of potential mineral resources impacts of the proposed plan were based on review of available documentation, including the California Department of Conservation Mineral Land Classification.

EIR Scoping Comments Consideration

California Geological Survey provided comments during the NOP scoping period in regard to using up to date maps for liquefaction and landslide. This comment is addressed above in Figure 3.5-4 and Figure 3.5-5. The Department of Toxic Substances Control provided comments during the NOP scoping period in regard to evaluation of mine waste. This comment is addressed below under Impact GEO-7.

Specific Thresholds of Significance

For purposes of this analysis, the following thresholds are used to evaluate the significance of geology, soils, and mineral resources impacts resulting from implementation of the proposed plan.

- Place structures on or within the State designated zone of a known earthquake fault.
- Place structures where seismic ground shaking of a Strong level or greater according to the Mercalli Scale could occur.
- Place structures on soils prone to any level of liquefaction.
- Place structures on slopes greater than 15 percent or soils susceptible to failure as defined by the USGS.
- Place structures in areas without impervious surfaces or vegetation, or on slopes greater than 15 percent.
- Place structures on a geologic unit or soil that is unstable or that could become unstable.
- Place structures on expansive soil that has an expansion index greater than 20 as defined in Table 18-1-B of the Uniform Building Code (1994).

- Place septic tanks or alternative wastewater disposal systems on soils incapable of supporting the use.
- Physically damage or destroy paleontological resources.

Impact Evaluation

Earthquake Fault Rupture Risk

Significance Criterion a1:	Would the proposed plan directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

Impact GEO-1 THERE IS AN ALQUIST PRIOLO EARTHQUAKE FAULT ZONE WITHIN THE 2040 GENERAL PLAN AREA, AND, THEREFORE, THE PROPOSED PLAN WOULD LIKELY BE SUBJECT TO EFFECTS INVOLVING RUPTURE OF A KNOWN EARTHQUAKE FAULT. IMPLEMENTATION OF PROPOSED GENERAL PLAN POLICIES AND EXISTING STATE AND LOCAL REGULATIONS WOULD REDUCE SEISMIC HAZARDS TO LESS THAN SIGNIFICANT.

Construction

Impacts related to risks associated with hazards involving fault rupture are limited to operational impacts. No respective construction impacts would occur.

Operation

The Calaveras Fault is classified as being within an Alquist Priolo Earthquake Fault Zone that extends in a north to south direction in the western portion of San Ramon. In the areas surrounding the Calaveras Fault, as shown in Figure 3.5-3, development setbacks from faults would be required under the Alquist-Priolo Earthquake Fault Zoning Act. The California Building Code, as adopted by the City of San Ramon, requires that seismic design features be incorporated in construction and redevelopment projects in San Ramon due to the proximity of a major fault zone. In addition to compliance with mandatory CBC requirements that address safe building development, including requirements to seismically upgrade existing structures, related to these hazards, the following 2040 General Plan Safety Element guiding policies and implementing policies would further minimize potential adverse effects related to strong ground shaking and seismic-related ground failure:

Guiding Policy 9.2-G-1: Minimize risks of personal injury and property damage posed by geologic and seismic hazards.

Policy 9.2-I-1 Review proposed development sites during the planning process to identify and mitigate any potential geologic or seismic hazards.

Policy 9.2-I-2 Require the preparation of a fault investigation study to identify appropriate setbacks for any proposed structure intended for human occupancy within 50 feet of an active fault trace.

Policy 9.2-I-3 Where appropriate, require an independent registered engineering geologist or geotechnical engineer to review geotechnical reports submitted by applicants on sites in seismically hazardous areas.

Policy 9.2-I-4 Require comprehensive geologic and engineering studies prior to construction of critical structures regardless of location.

Policy 9.2-I-5 Require geotechnical field review during the construction phase of any new development as determined by the City Engineer.

Policy 9.2-I-9 Provide information and establish incentives for property owners to rehabilitate existing buildings using construction techniques to protect against seismic hazards.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Seismic-related or Unstable Geologic Unit Risk

Significance Criterion a2, a3, & a4:	Would the proposed plan directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: 1. strong seismic ground shaking? 2. seismic-related ground failure, including liquefaction? 3. landslides?
Significance Criterion b:	Would the proposed plan be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Impact GEO-2 DEVELOPMENT FACILITATED BY THE PROPOSED PLAN COULD RESULT IN EXPOSURE OF PEOPLE OR STRUCTURES TO A RISK OF LOSS, INJURY, OR DEATH FROM SEISMIC EVENTS. DEVELOPMENT FACILITATED BY THE PROPOSED PLAN COULD BE LOCATED ON A GEOLOGIC UNIT OR SOIL THAT IS UNSTABLE OR COULD BECOME UNSTABLE RESULTING IN ON- OR OFF-SITE LANDSLIDE, LATERAL SPREADING, SUBSIDENCE, LIQUEFACTION, OR COLLAPSE. HOWEVER, WITH COMPLIANCE WITH APPLICABLE LAWS, REGULATIONS, AND APPLICABLE GENERAL PLAN GOALS AND POLICIES, THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Construction

Impacts related to risks associated with seismic-related hazards and location on an unstable geologic unit or soil are limited to operational impacts. No respective construction impacts would occur.

Operation

Development facilitated by the 2040 General Plan would result in additional residential or commercial development that would be potentially exposed to the effects of strong seismic ground shaking (as identified as Strong [VII Intensity or above] on the Mercalli Scale), seismic-related ground failure (liquefaction, lateral spreading, subsidence), and landslides resulting from local and

regional earthquakes. Structures built in landslide zones would be exposed to an existing risk of landslide or, if improperly constructed, could exacerbate existing landslide conditions, especially construction on sites in the eastern and western portions of San Ramon that are vulnerable to landslide hazards. New structures within the General Plan area could also experience substantial damage during seismic ground shaking events that are likely to occur in the future within the seismically active San Francisco Bay Area. Additionally, the eastern and western portions of San Ramon could experience liquefaction, lateral spreading, or subsidence due to a seismic event.

Development within San Ramon would be required to be built to current seismic standards that could better withstand the adverse effects of strong ground shaking. Potential structural damage and the exposure of people to the risk of injury or death from structural failure would be minimized by compliance with CBC engineering design and construction measures. Foundations and other structural support features would be required to be designed to resist or absorb damaging forces from strong ground shaking and liquefaction. Allowable increases in height as a result of the 2040 General Plan could require foundations and other structural support features to be more robust to support the additional height; however, compliance with CBC regulations would ensure that the buildings would meet seismic safety standards.

In addition to compliance with mandatory CBC requirements that address safe building development, including requirements to seismically upgrade existing structures, related to these hazards, 2040 General Plan Safety Element Guiding Policy 9.2-G-1, Policy 9.2-I-1, 9.2-I-2, 9.2-I-3, 9.2-I-4, 9.2-I-5, 9.2-I-9 as well as the following goals and policies would further minimize potential adverse effects related to strong ground shaking, seismic-related ground failure, and landslides:

Policy 9.2-I-6 Require, where appropriate, preparation of a soils report as part of the development review and/or building permit process.

Policy 9.2-I-7 Limit cut-and-fill slopes to 3:1 (33 percent slope) except where an engineering geologist or geotechnical engineer can establish to the satisfaction of the City Engineer that a steeper slope would not pose undue risk to people and property.

Policy 9.2-I-8 Blend cut-and-fill slopes with existing contours to avoid the appearance of artificial slopes.

Policy 9.2-I-10 Control erosion of graded areas with revegetation or other acceptable methods.

Policy 9.2-I-11 Require financial protection for public agencies and individuals as a condition of development approval where geologic conditions indicate a potential for high maintenance costs for areas of public benefit.

Policy 9.2-I-12 Encourage continued investigation by State agencies of geologic conditions within the City's Planning Area to promote public awareness of potential geologic and seismic hazards.

Policy 9.2-I-13 Review and update, as appropriate, City Code requirements for excavation, grading, and filling to ensure that they conform to current Federal, State, and regional standards.

Implementation of these 2040 General Plan guiding policies and policies, in addition to compliance with applicable laws and regulations such as CBC requirements, would minimize the potential for loss, injury, or death related to strong ground shaking, seismic-related ground failure, and landslides caused by a seismic event within the General Plan area. Thus, overall, compliance with all

aforementioned policies and requirements for both proposed and existing structures would minimize the potential for loss, injury, or death related to strong ground shaking, seismic-related ground failure, and landslides caused by a seismic event. Therefore, 2040 General Plan operational impacts related to strong seismic ground shaking, seismic-related ground failure risk, and landslide hazard would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Soil Erosion or Topsoil Loss

Significance Criterion c:	Would the proposed plan result in substantial soil erosion or the loss of topsoil?

Impact GEO-3 CONSTRUCTION FACILITATED BY THE 2040 GENERAL PLAN WOULD INCLUDE GROUND DISTURBANCE SUCH AS EXCAVATION AND GRADING THAT WOULD RESULT IN LOOSE OR EXPOSED SOIL. DISTURBED SOIL COULD BE ERODED BY WIND OR RAIN DURING A STORM EVENT, WHICH COULD RESULT IN THE LOSS OF TOPSOIL. ADHERENCE TO EXISTING REGULATORY REQUIREMENTS WOULD ENSURE THAT THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Construction

Development facilitated by the 2040 General Plan 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.

Construction activities that disturb one or more acres of land surface are subject to NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. R2-2015-0049, NPDES Permit No. CAS612008, adopted October 14, 2009, and revised November 19, 2015) adopted by the State Water Resources Control Board (SWRCB). Compliance with the permit requires each qualifying development project to file a Notice of Intent with the SWRCB. Permit conditions require preparation 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-storm water management controls. As described in Section 3.8, *Hydrology and Water Quality*, development within San Ramon would be required to comply with NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, otherwise known as the Construction General Permit (Order 2009-0009 NPDES No. CAS000002)), which requires measures to reduce and eliminate stormwater pollutants, installation of appropriate BMPs to control stormwater runoff from construction sites, and that grading and drainage permits be obtained prior to construction. Grading and drainage plans accompanying the permit application must include BMPs for erosion prevention and sediment control, fencing at waterways and in sensitive areas, and limitation of disturbed areas through temporary features. The permit applications must also demonstrate compliance with NPDES Municipal Separate Storm Sewer System Permits (MS4) provisions. Enforcement of these permit requirements would reduce soil erosion impacts.

Additionally, San Ramon Municipal Code requirements for erosion prevention and sediment control would apply to construction facilitated by the proposed plan. These include erosion prevention and sediment control in accordance with Title C, Chapter IV of the San Ramon Municipal Code, conformance of plans to erosion prevention and sediment control BMPs, grading restrictions during the winter rain period, potential need for water sprinkling equipment on site during grading, and regulations of cut and fill slopes. Adherence to the requirements of the San Ramon Municipal Code BMPs would reduce the potential for development facilitated by the proposed plan to cause erosion or the loss of topsoil by ensuring proper management of loose and disturbed soil. Therefore, 2040 General Plan construction impacts related to soil erosion and loss of topsoil would be less than significant.

Operation

Impacts related to soil erosion or loss of topsoil are limited to construction impacts. No respective operational impacts would occur.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Expansive Soil Risk

Significance Criterion d:	Would the proposed plan be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Impact GEO-4 FUTURE SEISMIC EVENTS COULD RESULT IN LIQUEFACTION AND LATERAL SPREADING OF SOILS WITHIN THE CITY. DEVELOPMENT IN THE GENERAL PLAN AREA COULD BE SUBJECT TO LIQUEFACTION HAZARDS. COMPLIANCE WITH THE CBC WOULD REDUCE LIQUEFACTION HAZARDS. PROPOSED HEALTH, SAFETY, AND HAZMAT GOALS AND POLICIES APPLY TO DEVELOPMENT FACILITATED BY THE PROPOSED PLAN IN HAZARD ZONES FOR LIQUEFACTION OR LATERAL SPREADING OF SOILS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Impacts related to risks associated with location on expansive soil are limited to operational impacts. Construction of development facilitated by the 2040 General Plan would comply with the CBC and applicable federal, State, and local regulations that would ensure construction activities (e.g., excavation of subterranean space) would not cause direct or indirect impacts to nearby properties in areas where expansive soils could potentially exist. No respective construction impacts would occur.

Operation

Development facilitated by the 2040 General Plan on expansive soils, as defined by Table 1-B of the Uniform Building Code (1994), within San Ramon could be subject to damage or could become unstable when the underlying soil shrinks or swells (see Figure 3.5-2 for soils underlying San

Ramon). The adverse effects of expansive soils can be avoided through proper subsoil preparation, drainage, and foundation design. In order to design an adequate foundation, it must be determined if the site contains expansive soils through appropriate soil sampling and laboratory soils testing. Expansive soils are identified through expansion tests of samples of soil or rock, or by means of the interpretation of Atterberg limit tests, a standard soils testing procedure. The CBC includes requirements to address soil-related hazards, including testing to identify expansive soils and design specifications where structures are to be constructed on expansive soils. Typical measures to treat expansive 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 the forces of expansive soils. Compliance with the requirements of the CBC, as well as relevant General Plan policies (as discussed in detail under Impact GEO-2), would reduce risks related to expansive soils. Therefore, 2040 General Plan operational impacts related to expansive soils would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Soils Incapable of Supporting Alternative Wastewater Disposal Systems

Significance Criterion e:	Would the proposed plan 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?

Impact GEO-5 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD OCCUR ON URBANIZED SITES THAT ARE SERVED BY EXISTING SANITATION INFRASTRUCTURE. NEW DEVELOPMENT WOULD NOT INCLUDE SEPTIC SYSTEMS. THERE WOULD BE NO IMPACT .

Construction

Impacts related to the soil capability of supporting the use of alternative wastewater disposal systems are limited to operation. No construction impacts would occur.

Operation

Development facilitated by the 2040 General Plan would occur in urbanized areas where existing wastewater infrastructure exists. The proposed plan would not include or require the use of septic tanks or alternative wastewater disposal systems. Therefore, no operational impacts would occur.

Mitigation Measures

No mitigation is required.

Level of Significance

No impact

Effects on Unique Paleontological Resources or Geologic Features

Significance Criterion f:	Would the proposed plan directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact GEO-6 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN HAS THE POTENTIAL TO IMPACT PALEONTOLOGICAL RESOURCES. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

Consistent with SVP guidelines,[14] the paleontological sensitivity of the seven geologic units underlying the General Plan area were assessed based on review of published geologic maps, a literature review, and online fossil locality databases. The age and paleontological sensitivity of these geologic units are summarized in Table 3.5-2 and respective locations are shown in Figure 3.5-1.

Table 3.5-2 Geologic Units in General Plan Area and Paleontological Sensitivity

Geologic Unit[15,16,17,18,19,20]	Age	Paleontological Sensitivity[14]
Quaternary alluvium (Qa)	Holocene	Low
Quaternary landslide deposits (Qls)	Holocene and Pleistocene	Low
Quaternary older alluvium (Qoa)	Pleistocene	High
Livermore Gravel (QTlg)	Pleistocene and Pliocene	High
Orinda Formation (Tor)	Miocene	High
Briones Sandstone (Tbr)	Miocene	High
Monterey Formation (Tm and Tmc)	Miocene	High

Construction

Ground-disturbing construction activities that impact previously undisturbed geologic units with high paleontological sensitivity may result in significant impacts to paleontological resources (Table 3.5-2). However, potentially significant impacts to paleontological resources can only be determined once a specific project has been proposed because the effects are highly dependent on both the individual project site conditions (e.g., presence of previously disturbed sediments or artificial fill) and the characteristics of the proposed ground disturbance (e.g., depth, total volume, type of construction). Ground-disturbing activities associated with construction facilitated by the 2040 General Plan particularly in areas that have not previously been developed with urban uses, have the potential to damage or destroy paleontological resources that may be present on or below the ground surface in areas of high paleontological sensitivity. Consequently, damage to or destruction of fossils could occur due to development under the proposed 2040 General Plan. However, implementation of Mitigation Measure GEO-1 would reduce 2040 General Plan construction impacts related to the destruction of paleontological resources or unique geological features to less than significant with mitigation.

Operation

Impacts with the potential to cause substantial adverse changes in the significance of a unique paleontological resource or unique geologic feature are limited to construction. No respective operational paleontological resources impacts would occur.

Mitigation Measures

MITIGATION MEASURE GEO-1: PROTECT PALEONTOLOGICAL RESOURCES

The City of San Ramon shall provide for the protection of paleontological resources. The City shall require the following:

- A Qualified Professional Paleontologist (as defined by SVP[14]) must be retained to conduct a paleontological resources analysis prior to the beginning of projects involving ground disturbance in geologic units with high paleontological sensitivity to determine whether there is a potential for significant impacts to paleontological resources.
- If potential impacts to paleontological resources are found to be significant, then a Qualified Professional Paleontologist shall be retained to develop and implement a Paleontological Resources Mitigation Program to ensure that impacts to paleontological resources are less than significant.

Level of Significance

Less than significant with mitigation

Availability of a Mineral Resource or Recovery Site

Significance Criterion g:	Would the proposed plan result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?
Significance Criterion h:	Would the proposed plan result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

Impact GEO-7 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD NOT HAVE THE POTENTIAL TO IMPACT MINERAL RESOURCES. THERE WOULD BE NO IMPACT.

Construction and Operation

There are no significant mineral deposits or active mining operations within or in the vicinity of the General Plan area. In addition, implementation of the proposed plan would not affect a locally important mineral resource recovery site delineated by an applicable land use plan. Therefore, the proposed plan would not result in the loss of availability of a known mineral resource or a locally important mineral resource recovery site during construction or operational activities. No construction or operational mineral resources impacts would occur.

Mitigation Measures

No mitigation is required.

Level of Significance

No impact

3.5.5 Cumulative Impacts

The geographic scope of the cumulative geology/soils and mineral resources analysis is the General Plan area and the surrounding vicinity. Adverse effects associated with many geologies and soils tend to be localized; therefore, an area generally within a 0.25-mile radius would be the area most affected by activities in combination with the proposed plan. In addition, adverse effects associated with paleontological resource impacts tend to be localized, because the integrity of any given resource depends on what occurs only in the immediate vicinity around that resource, such as disruption of soils. The cumulative analysis considers the nearby past, present, and reasonably foreseeable future plans and projects listed in Table 3-1 (refer to Chapter 3, *Environmental Impact Analysis*) located in surrounding cities in addition to the proposed plan.

Seismic-related Hazards

Cumulative projects, including the proposed plan, have the potential to experience strong to violent groundshaking from earthquakes. Cumulative projects listed in Table 3-1 would be exposed to the similar ground shaking hazards and would be subject to the same requirements. All cumulative projects would adhere to the provisions of the California Building Code, and policies of the 2040 General Plan and San Ramon Municipal Code and surrounding city general plans and municipal codes, reducing potential hazards associated with seismic ground shaking and ground failure. Therefore, the cumulative impact related to seismic-related hazards would be less than significant.

Soil-related Hazards

Soil conditions associated with the proposed plan, such as differential settlement, expansive soils, and soil creep, are specific to the plan area and generally do not contribute to a cumulative effect. Some or all other cumulative projects may have similar conditions, but they also would not contribute to a general geologic or soil cumulative effect. The proposed plan would be subject to all City of San Ramon 2040 General Plan policies, municipal code policies, and the CBC reducing soil-related hazard impacts. Other current and future development projects in the region would similarly be required to adhere to standards and practices that include stringent geologic and soil-related hazard mitigations. Therefore, the cumulative impact related to soil-related hazards would be less than significant.

Unique Geological Feature and Paleontological Resources

Construction activities associated with development of cumulative plans and projects in or within the vicinity of the General Plan area may have the potential to encounter undiscovered geologic resources and paleontological resources. The potential impacts to paleontological resources of each of those projects would be on an individual basis, depending on their location and construction activities, rather than cumulative. Therefore, cumulative impacts related to paleontological resources and unique geologic features would be less than significant.

Mineral Resources

Since there is no plan-level impact related to mineral resources, there would also be no cumulative impact related to mineral resources.

Overall Level of Cumulative Significance

Less than significant

3.6 Greenhouse Gas Emissions and Energy

3.6.1 Introduction

This section describes existing greenhouse gas (GHG) emissions and sources and energy use Statewide, regionally, and within the City of San Ramon as well as the relevant regulatory framework. This section also analyzes possible impacts related to greenhouse gas (GHG) emissions and energy use from implementation of the 2040 General Plan. Information included in this section is based partially on GHG emissions data from the Intergovernmental Panel on Climate Change (IPCC), United States Environmental Protection Agency (USEPA), California Air Resources Board (CARB), Bay Area Air Quality Management District (BAAQMD), and City of San Ramon, energy data from the California Energy Commission (CEC), vehicle miles traveled (VMT) data drawn from the San Ramon 2040 General Plan Transportation Impact Assessment (TIA) report, which is included as Appendix E to this EIR, and energy calculation outputs included as Appendix C to this EIR.

3.6.2 Environmental Setting

Greenhouse Gas Emissions

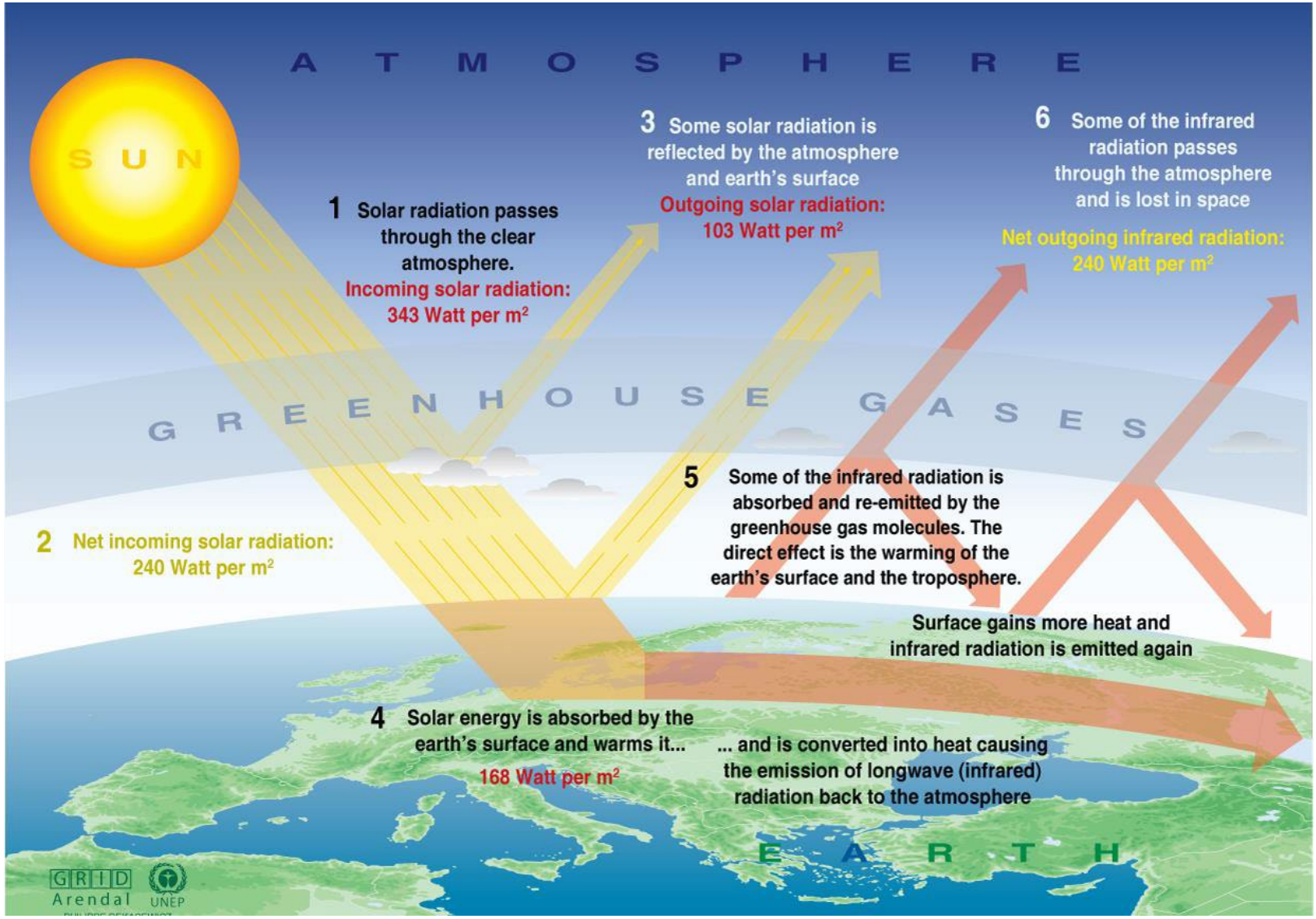
Greenhouse Effect, Global Warming, and Climate Change

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.

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, by trapping some of the infrared radiation emitted from the Earth's surface that otherwise would have escaped to space (see Figure 3.6-1). Radiative forcing is the difference between the incoming energy and outgoing energy. Specifically, GHGs affect the radiative forcing of the atmosphere, 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, thereby 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 19th 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. 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.

Figure 3.6-1 The Greenhouse Gas Effect



Source: United Nations Environmental Program/GRID-Arendal. 2005. Greenhouse Effect. <https://www.grida.no/resources/6467>.

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.

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 ways collectively referred to as climate change. Climate change is the alteration in the average weather of the Earth that is measured by modifications 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

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 degrees Celsius (°C) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios. 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-20th century is very likely due to the observed increase in anthropogenic GHG concentrations." Warming of the climate system is now considered to be unequivocal, with the global surface temperature increasing about 1.33 degrees Fahrenheit (°F) 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.[1]

GREENHOUSE GASES AND GLOBAL EMISSION SOURCES

Gases that trap heat in the atmosphere are referred to as GHGs. 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]) and aerosols, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). The GHGs listed by the IPCC (CO_2, CH_4, nitrous oxide (N_2O), HFCs, PFCs, and SF_6) 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 (CFCs, halons, carbon tetrachloride, methyl chloroform, and hydrochlorofluorocarbons) are not included, because they have been replaced by HFCs and PFCs.

[1] IPCC. 2007. AR4 Climate Change 2007: The Physical Science Basis. https://www.ipcc.ch/report/ar4/wg1/ (accessed March 2023)

The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere and is essentially a measurement of the radiative forcing of a GHG compared with the reference gas, CO_2. Individual GHG compounds have varying potential for contributing to global warming. For example, CH_4 is 25 times as potent as CO_2, while SF_6 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.[2] 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 CO2 (by definition, CO_2 has a GWP of 1). The global warming potential 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 mass emissions of an individual GHG multiplied by its global warming potential. 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) 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. 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 3.6-1 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 SF_6 are referred to as high-GWP gases. CO_2 is by far the largest component of worldwide CO_2e emissions, followed by CH_4, N_2O, 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 CH_4, 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, CH_4, and N_2O emissions associated with human activities are the next largest contributors to climate change. GHGs of California concern are defined by California Assembly Bill (AB) 32 (see the Regulatory Environment subsection below for a description) and include CO_2, CH_4, NOX, 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, global warming potential, atmospheric residence lifetime, and sources in Table 3.6-1.

[2] IPCC. 2014. Frequently Asked Questions. https://www.ipcc-nggip.iges.or.jp/faq/FAQ.pdf (accessed March 2023)

Table 3.6-1 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 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)	N_2O (laughing gas) is a colorless GHG.	273	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 CH_4 or ethane with chlorine and/or fluorine atoms.	3,500–16,200	45–640	Refrigerants aerosol propellants; cleaning solvents.
Hydro-fluoro-carbons (HFCs)	Synthetic human-made chemicals used as a substitute for CFCs and contain carbon, chlorine, and at least one hydrogen atom.	2--14,600	1–50,000	Automobile air conditioners; refrigerants.
Per- fluoro-carbons (PFCs)	Stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface.	6,500-9,200	10,000–50,000	Primary aluminum production; semiconductor manufacturing.
Sulfur hexafluoride (SF_6)	Human-made, inorganic, odorless, colorless, and nontoxic, nonflammable gas.	25,200	3,200	Electrical power transmission equipment insulation; 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.	17,400	740	Electronics manufacture for semiconductors and liquid crystal displays.

Sources:
IPCC 2007. AR4 Climate Change 2007: Synthesis Report. <https://www.ipcc.ch/report/ar4/syr/>.
IPCC 2021. AR6 Climate Change 2021: The Physical Science Basis. < https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/>

Global Climate Change

EXTENT

Climate change results in global impacts, because GHGs are global pollutants, unlike criteria air pollutants and hazardous air pollutants (i.e., toxic air contaminants) that are pollutants of regional and local concern. Pollutants with localized air quality effects have relatively short atmospheric lifetimes, approximately one day; by contrast, GHGs have long atmospheric lifetimes, several years to several thousand years. GHGs persist in the atmosphere for enough time to be dispersed around the globe.

Although the exact lifetime of particular GHG molecules 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 (Seinfeld 2006).

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 plan or 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. However, emissions of GHGs have the potential to adversely affect the environment, because such emissions contribute, on a cumulative basis, to global climate change.

TRENDS AND EFFECTS

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than was observed during the 20th century. Long-term trends found that each of the past four decades was warmer than all the previous decades in the instrumental record. The observed global mean surface temperature for the decade from 2011 to 2020 was 1.1°C higher than the global mean surface temperature over the period from 1850 to 1900. Several independently analyzed data records of global and regional Land-Surface Air Temperature obtained from station observations agree that Land-Surface Air Temperature and sea surface temperatures have increased. Due to past and current activities, anthropogenic GHG emissions are increasing global mean surface temperature at a rate of 0.2°C per decade. In addition, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades.[3,4]

According to California's Fourth Climate Change Assessment, Statewide temperatures from 1986 to 2016 were approximately 1°F to 2°F higher than those recorded from 1901 to 1960. Potential impacts of climate change in California may include loss in water supply from snowpack, sea level

[3] IPCC. 2014. Summary for Policymakers. In: AR5 Climate Change 2014, Mitigation of Climate Change. https://www.ipcc.ch/report/ar5/wg3/ (accessed March 2023)
[4] IPCC. 2018. Summary for Policymakers. In: Global warming of 1.5°C. An IPCC Special Report. https://www.ipcc.ch/sr15/ (accessed March 2023)

rise, more extreme heat days per year, more large forest fires, and more drought years. While there is growing scientific consensus about the possible effects of climate change at a global and Statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy.[5]

In California, climate change may result in consequences such as the following:

- **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 forests, 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.
- **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 seven 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.
- **Increase in 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.
- **Decrease in the health and productivity of California's forests.** Climate change can cause an increase in wildfires, an enhanced nuisance insect population, and establishment of non-native species.
- **Damage to marine ecosystems and natural environment.** Climate change can cause damage to marine ecosystems, including acidification of the oceans due to increased CO_2 levels (including coral bleaching).

[5] California, State of. 2018. California Fourth Climate Change Assessment Statewide Summary Report. http://www.climateassessment.ca.gov/state/ (accessed March 2023)

Existing GHG Emissions

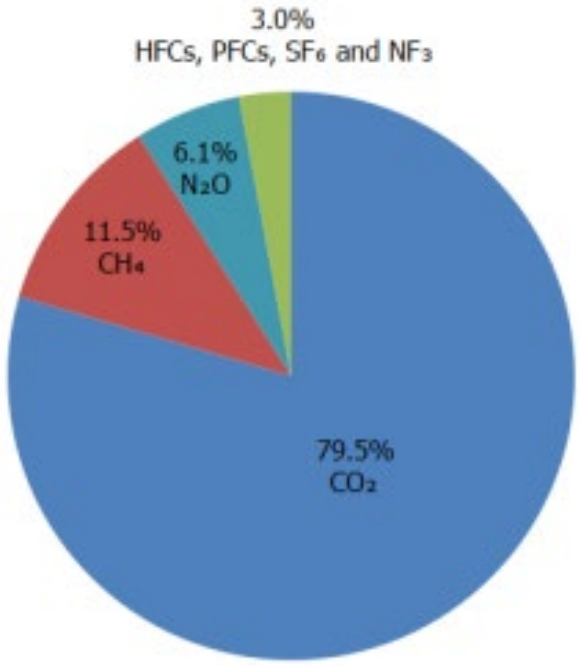
GLOBAL

In 2019, worldwide anthropogenic emissions totaled 49,758 billion MT of CO_2e, which is a 53 percent increase from 1990 GHG levels. Specifically, 74.4 percent of CO_2e is from CO_2, 17.3 percent from CH_4, 6.2 percent from N_2O, and 2.1 percent from fluorinated gases were emitted in 2019. The largest source of GHG emissions were energy production and use (includes fuels used by vehicles and buildings), which accounted for 73.2 percent of the global GHG emissions. Agriculture uses and industrial processes contributed 18.4 percent and 5.2 percent, respectively. Waste sources contributed to 3.2 percent.[6]

UNITED STATES

Total U.S. GHG emissions were 6,347.7 $MMTCO_2e$ in 2021. Total U.S. emissions decreased by 2.0 percent from 1990 to 2021. Overall, net emissions increased by 6.8 percent from 2020 to 2021 and decreased 16.3 percent from 2005 levels. From 2019 to 2020, there was a sharp decline in emissions largely due to the effects of the coronavirus (COVID-19) pandemic on travel and other economic activity. Between 2020 and 2021, the increase in total GHG emissions was driven largely by an increase in CO_2 emissions from fossil fuel combustion due to economic activity rebounding after the COVID-19 pandemic. In 2021, the largest source of CO_2 and of overall emissions, was fossil fuel combustion, representing approximately 79.5 percent of U.S. GHG emissions (see Figure 3.6-2). CH_4 accounted for nearly 11.5 percent, N_2O accounted for approximately 6.1 percent, and the remaining 3.0 percent of U.S. GHG emissions were HFCs, PFCs, SF_6, and NF_3.[7]

Figure 3.6-2 2021 U.S. GHG Emissions by Gas



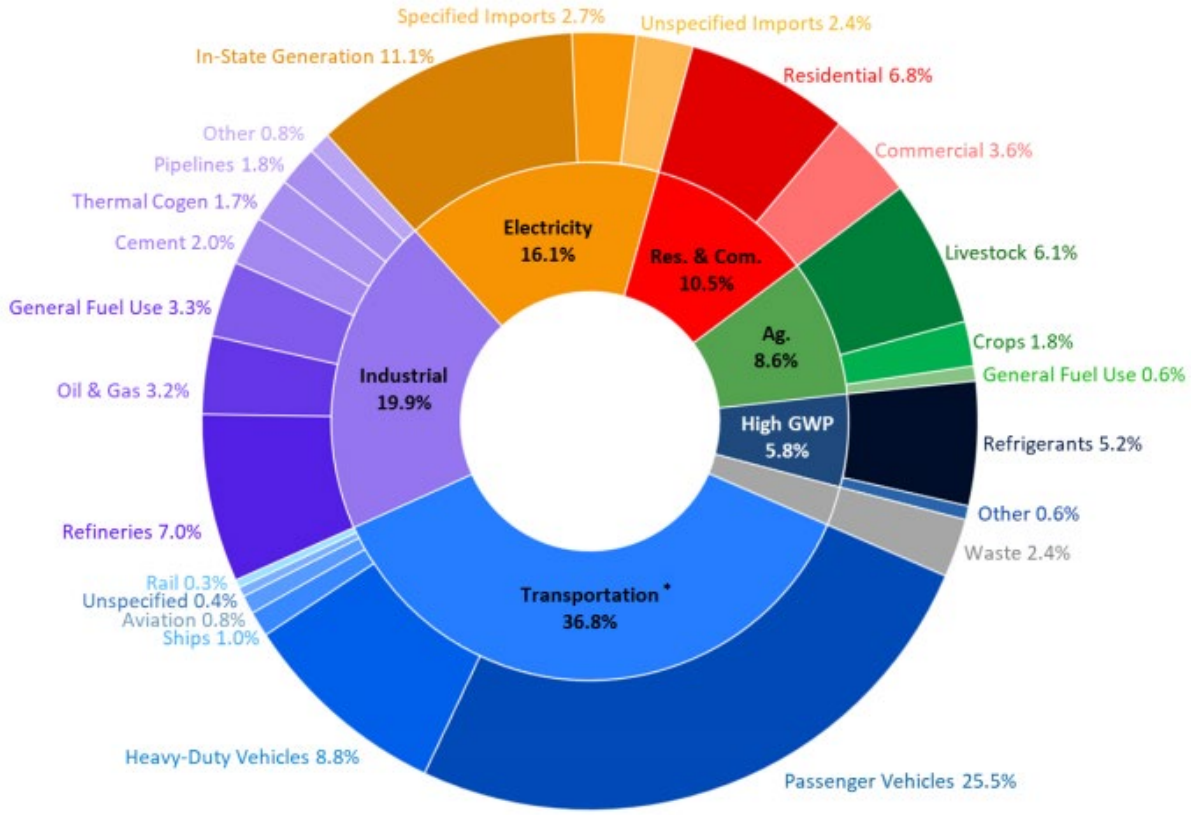
Source: US EPA. 2023. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2021.

[6] Our World in Data. 2023. Greenhouse Gas Emissions. https://ourworldindata.org/greenhouse-gas-emissions (accessed March 2023).
[7] US EPA. 2023. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2021. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2021 (accessed June 2023).

CALIFORNIA

According to the California Air Resources Board (CARB), total California GHG emissions were 369.2 $MMTCO_2e$ in 2020.[8] The major source of GHGs in California is associated with transportation, contributing nearly 37 percent of Statewide GHG emissions in 2020. The industrial sector is the second largest source, contributing 20 percent of Statewide GHG emissions, and the electricity sector accounted for approximately 16 percent (see Figure 3.6-3).

Figure 3.6-3 2020 California GHG Emissions by Scoping Plan Sectors and Sub-Sectors



Note: This figure breaks out 2020 California emissions by sector into an additional level of sub-sector categories. The inner ring shows the broad CARB Climate Change Scoping Plan sectors. The outer ring breaks out the sectors into sub-sectors or emission categories. The transportation sector represents tailpipe emissions from on-road vehicles and direct emissions from other off-road mobile sources; it does not include emissions from petroleum refineries and oil extraction and production, which are included in the industrial sector.

Source: CARB. 2022. California GHG Emissions for 2000 to 2020: Trends of Emissions and Other Indicators. https://ww2.arb.ca.gov/sites/default/files/classic/cc/inventory/2000-2020_ghg_inventory_trends.pdf (accessed March 2023)

[8] CARB. 2022. California GHG Emissions for 2000 to 2020: Trends of Emissions and Other Indicators. https://ww2.arb.ca.gov/sites/default/files/classic/cc/inventory/2000-2020_ghg_inventory_trends.pdf (accessed April 2023)

SAN RAMON (GENERAL PLAN AREA)

In 2019, San Ramon generated approximately 438,067 MT CO_2e from community activities.[9] On-road motor vehicles were the largest sources of GHG emissions within San Ramon, generating approximately 52 percent of total community GHG emissions. Natural gas was the second largest GHG emission source, generating approximately 27 percent of total community GHG emissions. Electricity consumption contributing only 10 percent of total community GHG emissions, with a significant proportion of San Ramon's electricity consumption being generated by renewable sources through participation in Marin Clean Energy (MCE).[10] Off-road equipment contributed 8 percent of total GHG emissions, while waste and wastewater treatment process represented the smallest GHG emissions sources at 4 percent and 1 percent, respectively. Table 3.6-2 and Figure 3.6-4 provide a summary of the 2019 community GHG emissions inventory results by GHG emission sector.

Table 3.6-2 2019 San Ramon Community GHG Emissions Inventory by Sector

GHG Emissions Sector	GHG Emissions (MT CO_2e)	Percent of GHG Emissions Totals
On-road Motor Vehicles	226,299	52%
Natural Gas (residential, commercial, and transmission and distribution losses)	117,360	27%
Electricity (residential, commercial, transmission and distribution losses, and water transport)	42,249	10%
Off-road Equipment	33,415	8%
Waste	15,376	4%
Wastewater Treatment Processes	3,369	1%
Total	**438,067**	**100%**

Source: San Ramon, City of. 2023. 2019 Community GHG Emissions Inventory Results Memorandum.

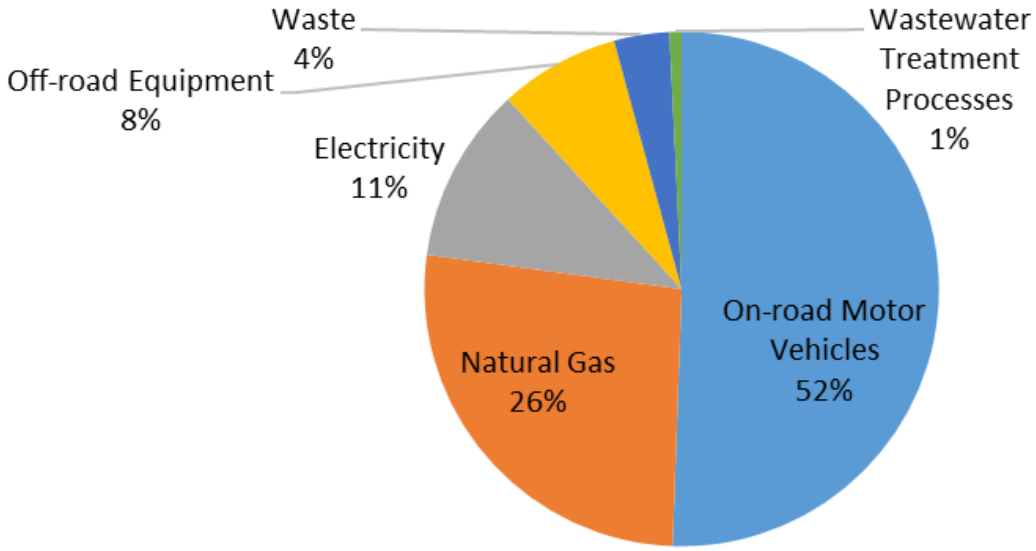
MT CO_2e = metric tons of carbon dioxide equivalent

Totals may not add up due to rounding.

[9] City of San Ramon. 2023. 2019 Community GHG Emissions Inventory Results Memorandum.

[10] The City of San Ramon joined Marin Clean Energy in 2018, at which point electricity customers in the were automatically enrolled in the "Light Green" rate product, providing 50 precent renewable energy. As of 2019, the "Light Green" rate product had increased its renewable mix of electricity to 60 percent.

Figure 3.6-4 2019 San Ramon Community GHG Emissions Inventory by Sector



Source: San Ramon, City of. 2023. 2019 Community GHG Emissions Inventory Results Memorandum.

Energy

Energy Fundamentals

Energy is generally transmitted either in the form of electricity, measured in kilowatts (kW) or megawatts (MW), or natural gas measured in British thermal units (BTU), cubic feet, or therms. Fuel, such as gasoline or diesel, is measured in gallons or liters.

ELECTRICITY

Electricity is used primarily for lighting, appliances, cooking purpose, HVAC equipment, and other uses associated with building and vehicle operations. Electricity sources range from renewable (hydroelectric, solar, wind, geothermal, biomass) to nonrenewable (natural gas, oil, nuclear, coal).

NATURAL GAS

Natural gas is used primarily for heating, water heating, and cooking purposes and is typically associated with building operations.

FUEL

Fuel is used primarily for powering off-road equipment and vehicles (commercial trucks and other vehicles). The typical fuel types used are diesel and gasoline.

Electricity Generation, Distribution and Storage

CALIFORNIA

According to the California Energy Commission (CEC), California generated approximately 277,764 gigawatt-hours (GWh) of electricity in 2021. As shown in Table 3.6-3, approximately 37.9 percent of this electricity was sourced from natural gas, 33.6 percent from renewable sources, 9.3 percent

from nuclear, 9.2 percent from large hydroelectric sources, and the remaining 10 percent was sourced from coal, oil, other, and unspecified sources. Specifically, the 33.6 percent of California's 2021 retail electric sales that were served by renewable resources included sources from wind, solar, geothermal, biomass, and small hydroelectric.[11]

Table 3.6-3 California 2021 Total System Electric Generation

Fuel Type	In-State Generation (GWh)	Percent of In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	State Energy Mix (GWh)	State Power Mix
Coal	303	0.2%	181	7,788	8,272	3.0%
Large Hydro	12,036	6.2%	12,042	1,578	25,656	9.2%
Natural Gas	97,431	50.2%	45	7,880	105,356	37.9%
Nuclear	16,477	8.5%	524	8,756	25,758	9.3%
Oil	37	0.00%	0	0	37	0.00%
Other (Petroleum/ Waste Heat)	382	0.2%	68	15	465	0.2%
Renewables	67,461	34.8%	11,555	14,317	93,333	33.6%
Biomass	5,381	2.8%	864	26	6,271	2.3%
Geothermal	11,116	5.7%	192	1,906	13,214	4.8%
Small Hydro	2,531	1.3%	304	1	2,835	1.0%
Solar	33,260	17.1%	220	5,979	39,458	14.2%
Wind	15,173	7.8%	9,976	6,405	31,555	11.4%
Unspecified	N/A	0.00%	8,156	10,731	18,887	6.8%
Total	**194,127**	**100.00%**	**32,572**	**51,064**	**277,764**	**100.00%**

GWh = gigawatt-hours

Source: CEC 2022a. California 2021 Total System Electric Generation. https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2021-total-system-electric-generation (accessed April 2023)

Electricity is distributed through the various electric load-serving entities (LSEs) in California. These entities include investor-owned utilities, publicly owned LSEs, rural electric cooperatives, community choice aggregators, and electric service providers.[12]

Contra Costa County

Contra Costa County as a whole consumed approximately 8,287 GWh of electricity in 2021 from residential and non-residential uses.[13]

San Ramon (General Plan Area)

Two electricity providers serve San Ramon: Marin Clean Energy (MCE) and Pacific Gas and Electric Company (PG&E). MCE provides clean energy that is 60 to 100 percent carbon free, either sourced entirely from renewable energy (50 percent solar and 50 percent wind) or 60.5 percent renewable

[11] CEC. 2022a. California 2021 Total System Electric Generation. https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2021-total-system-electric-generation (accessed March 2023)
[12] CEC. 2021. Electric Load-Serving Entities (LSEs) in California. https://www.energy.ca.gov/almanac/electricity_data/utilities.html (accessed March 2023)
[13] CEC. 2022b. Electricity Consumption by County. http://www.ecdms.energy.ca.gov/elecbycounty.aspx (accessed March 2023)

(including biomass & biowaste, geothermal, small hydroelectric, solar, and wind).[14] PG&E's default power mix offers 48 percent renewable, and they offer customers options for 47.7 percent, 70.9 percent, 89.9 percent, or 93.9 percent renewable power mixes.[15] In conjunction with the utility companies, the California Public Utilities Commission (CPUC) is involved in energy conservation programs.

Natural Gas Distribution

CALIFORNIA

According to the CPUC, natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California gas utilities are Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Mojave Pipeline, and Tuscarora.[16] Because natural gas is a dispatchable energy resource that provides load when the availability of hydroelectric power generation and/or other energy sources decrease, distribution varies greatly from year to year. The availability and distribution of hydroelectric-sourced energy, increasing renewable-source energy, and overall consumer demand are the variables that shape the need for natural gas.

CONTRA COSTA COUNTY

Contra Costa County as a whole consumed approximately 972 million therms of natural gas in 2021 in both residential and non-residential uses.[17]

SAN RAMON (GENERAL PLAN AREA)

PG&E is the natural gas provider for San Ramon. The nearest PG&E gas transmission pipelines run along San Ramon Valley Boulevard south of Montevideo Drive and along Dougherty Road through the Dougherty Hills connecting to Alcosta Boulevard. There are two distribution gas pipelines located throughout San Ramon.[18]

Fuel Distribution

CALIFORNIA

According to the 2015 CEC market share data, California consists of distributors of gasoline, which include companies or individuals who make the first distribution of gasoline in California. Aircraft manufacturers and certificated or licensed carriers by air may be included within the definition of distributor. Distributors can also be "Brokers," which includes every person, other than a distributor or a retailer, who deals in lots of 200 or more gallons of gasoline.[19]

[14] MCE. 2022. Annual Power Content Label. https://www.mcecleanenergy.org/energy-suppliers/ (accessed March 2023)
[15] PG&E. 2022. 2021 Power Mix Pacific Gas and Electric Company. https://www.pge.com/pge_global/common/pdfs/your-account/your-bill/understand-your-bill/bill-inserts/2022/1022-Power-Content-Label.pdf (accessed April 2023).
[16] CPUC. 2021. Natural Gas and California. https://www.cpuc.ca.gov/natural_gas/#:~:text=Natural%20gas%20from%20out%2Dof,interstate%20natural%20gas%20pipeline%20system.&text=The%20state's%20natural%20gas%20utilities%20operate%20over%20100%2C000%20miles%20of,more%20miles%20of%20service%20line (accessed April 2023)
[17] CEC. 2022c. Gas Consumption by County. http://www.ecdms.energy.ca.gov/gasbycounty.aspx (accessed April 2023)
[18] PG&E. 2022a. Explore our natural gas transmission pipeline map. https://www.pge.com/en_US/safety/how-the-system-works/natural-gas-system-overview/gas-transmission-pipeline/gas-transmission-pipelines.page (accessed April 2023)
[19] CEC. 2015. Gasoline Market Share in California for 2014. https://ww2.energy.ca.gov/almanac/transportation_data/gasoline/market_share/ (accessed April 2023)

Based on the California Transportation of Petroleum Second Northern California Refinery Safety Forum, output from the refineries is usually placed in intermediate tanks before blending finished products. Most gasoline is shipped from refinery by pipeline, which serves over 60 distribution terminals, which is then transported to retail and nonretail stations by tanker trucks.[20]

SAN RAMON (GENERAL PLAN AREA)

There are 16 gasoline and diesel fueling stations within San Ramon.

Available Alternative Vehicle Fuels

Various Statewide regulations and plans encourage alternative fuel use to reduce GHG emissions and criteria pollutant emissions. These include the Low Carbon Fuel Standard, SB 32, and AB 1279, as well as myriad other Statewide and local air district regulations. Conventional gasoline and diesel may be replaced with different alternative fuels, depending on the capability of the vehicle. Descriptions of the most widely used alternative fuels include the following:

- **Electricity** can power electric and plug-in hybrid electric vehicles directly from the power grid. Generally, these vehicles draw from the electricity grid and store the energy in their batteries. San Ramon has 10 electric vehicle charging stations throughout San Ramon.[21]
- **Biodiesel** is a renewable alternative fuel that can be manufactured from vegetable oils, animal fats, or recycled restaurant grease. Biodiesel is biodegradable and cleaner-burning than petroleum-based diesel fuel. Generally, biodiesel can run in any diesel engine without alterations, but fueling stations have been slow to make it available. There are 10 biodiesel refueling stations in California, but none in the City of San Ramon. According to the USDOE, the closest biodiesel station to San Ramon is in the City of Berkeley.[22]
- **Compressed natural gas (CNG) and liquefied natural gas (LNG)** is currently being used in vehicles. CNG is used in light-, medium-, and heavy-duty vehicles and gets about the same fuel economy. LNG is costly to produce and therefore is used in limited applications, typically in medium- and heavy-duty vehicles. There is one CNG station and no LNG stations within San Ramon. The nearest LNG station is in the City of Lathrop.[23]
- **Hydrogen** is being explored for use in combustion engines and fuel cell electric vehicles. The interest in hydrogen as an alternative transportation fuel stems from its clean-burning qualities, its potential for domestic production, and the fuel cell vehicle's potential for high efficiency: hydrogen is two to three times more efficient than gasoline. Fuel cells are being explored as a way to use electricity generated on-board the vehicle to power electric motors. Fuel cells are being explored as a way to use electricity generated on-board the vehicle to power electric motors. San Ramon has one hydrogen station.[24]

[20] Schremp. 2015. California Transportation of Petroleum: Second Northern California Refinery Safety Forum. https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/Refinery-Documents-2015yr-Petroleum.pdf (accessed April 2023).
[21] USDE. 2022. Alternative Fuels Data Center. https://afdc.energy.gov/fuels/electricity_locations.html#/find/nearest?fuel=ELEC&location=san%20ramon,%20ca (accessed April 2023).
[22] Ibid.
[23] Ibid.
[24] Ibid.

Existing Energy Use

CALIFORNIA

According to the U.S. Energy Information Administration (USEIA), total electricity direct consumption within California in 2021 was 13,108,353 MWh, up 4.5 percent, or 563,074 MWh, from 2020.[25] In 2021, California was the fourth-largest electricity producer in the nation and was the nation's second-largest consumer of electricity.[26] In 2021, total California natural gas demand for industrial, residential, commercial, and electric power generation was 2,101 billion cubic feet per year.[27]

The main category of fuel use in California is transportation fuel, specifically gasoline and diesel. Gasoline is the most used transportation fuel in California: 97 percent of all gasoline sold in California is consumed by light-duty cars, pickup trucks, and sport utility vehicles. In 2021, an estimated 13,818 million gallons of gasoline annually (i.e., 37.9 million gallons of gasoline per day) were sold.[28] Diesel is the second largest transportation fuel used in California. Many heavy duty-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm, construction, and heavy-duty military vehicles and equipment have diesel engines. According to the 2019 California Annual Retail Fuel Outlet Report Results (CEC-A15), in 2021, 1,883 million gallons of diesel annually (i.e., 5.2 million gallons of diesel per day), including off-road diesel, was sold.[29]

CONTRA COSTA COUNTY

As shown in Table 3.6-4, approximately 402 million gallons of transportation fuel were consumed in Contra Costa County in 2021, of which approximately 374 million gallons were gasoline and approximately 28 million gallons were diesel fuel.[30] This equates to approximately 1.1 million gallons of fuel per day or 0.95 gallons of fuel per person per day, based on a 2022 Countywide population of 1,156,555 people.[31] According to the CEC, one gallon of gasoline is equivalent to approximately 109,786 Btu, while one gallon of diesel is equivalent to approximately 127,460 Btu.[32] Based on this formula, approximately 44.7 million Btu in transportation fuel were consumed per day in 2021 in Contra Costa County.

SAN RAMON (GENERAL PLAN AREA)

As shown in Table 3.6-4, San Ramon consumed approximately 27 million gallons of gasoline in 2021.[33] This equates to approximately 0.07 million gallons of fuel per day or 0.89 gallons of fuel per person per day, based on a 2022 citywide population of 83,820 people.[34] 3.0 million Btu in gasoline was consumed per day in 2021 in the City (see Table 3.6-4).

[25] USEIA. 2022a. California Electricity Profile 2021. https://www.eia.gov/electricity/state/california/ (accessed April 2023).
[26] USEIA. 2022b. California Profile Overview. https://www.eia.gov/state/?sid=CA#tabs-1 (accessed April 2023).
[27] Ibid.
[28] CEC. 2022d. California Gasoline, Data, Facts, and Statistics. https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-gasoline-data-facts-and-statistics (accessed April 2023)
[29] CEC. 2022e. 2010-2021 CEC-A15 Results and Analysis. https://www.energy.ca.gov/media/3874 (accessed April 2023)
[30] CEC. 2022f. California Retail Fuel Outlet Annual Reporting (CEC-A15) Results. https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting (accessed April 2023)
[31] California Department of Finance (CDF). 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2022 with 2010 Census Benchmark. https://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/ (accessed April 2022)
[32] Schremp, Gordon. 2017. Senior Fuels Specialist, California Energy Commission. Personal communication via phone and email regarding fuel consumption in California by County and by source with Lance Park, Associate Planner, Rincon Consultants, Inc. August 22, 2017.
[33] CEC. 2022d. 2010-2019 CEC-A15 Results and Analysis. https://www.energy.ca.gov/media/3874.
[34] CDF. 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2022 with 2010 Census Benchmark. https://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/ (accessed April 2023)

Table 3.6-4 Transportation Energy Consumption in Contra Costa County and San Ramon

Fuel Type	2021 Annual Fuel Use (million gallons)	2021 Daily Fuel Use (million gallons)	2021 Daily Energy Use (millions of Btu)	2021 Daily per Capita Energy Use (Btu)
Gasoline (County)	374	1.02	41.1	35.5
Diesel (County)	28	0.08	3.7	3.1
Total (County)	**402**	**1.1**	**44.7**	**38.6**
Gasoline (City)	27.0	.07	3.0	35.5

Notes: Btu = British thermal units

Source: CEC. 2022e.

3.6.3 Regulatory Framework

Additional regulatory information related to GHG emissions and energy efficiency standards are included throughout the other resource sections including Section 3.13, *Utilities and Service Systems*, which includes discussion of water use efficiency standards, solid waste standards, and wastewater standards, and Section 3.2, *Air Quality*, which includes discussion of air quality related regulations.

Federal Regulations

Clean Air Act (Regulation of GHGs)

The United States Environmental Protection Agency (US EPA) issued an Endangerment Finding under Section 202(a) of the Clean Air Act, opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are subject to regulation under the Clean Air Act. To date, the US EPA has not promulgated regulations on GHG emissions, but it has already begun to develop them.

Construction Equipment Fuel Efficiency Standard

US EPA sets emission standards for construction equipment. The first federal standards (Tier 1) were adopted in 1994 for all off-road engines over 50 horsepower (hp) and were phased in by 2000. A new standard was adopted in 1998 that introduced Tier 1 for all equipment below 50 hp and established the Tier 2 and Tier 3 standards. The Tier 2 and Tier 3 standards were phased in by 2008 for all equipment. The current iteration of emissions standards for construction equipment are the Tier 4 efficiency requirements are contained in 40 Code of Federal Regulations Parts 1039, 1065, and 1068 (originally adopted in 69 Federal Register 38958 [June 29, 2004], and most recently updated in 2014 [79 Federal Register 46356]). Emissions requirements for new off-road Tier 4 vehicles were to be completely phased in by the end of 2015.

U.S. Consolidated Appropriations Act (Mandatory GHG Reporting)

The Consolidated Appropriations Act, passed in December 2007, required the establishment of mandatory GHG reporting requirements. In September 2009, the US 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 metric tons or more per year of GHG emissions are required to submit annual reports to the US EPA.

Federal Fuel Efficiency Standards (CAFE)

Enacted in 1975, this legislation established fuel economy standards for new light-duty vehicles (autos, pickups, vans, and sport-utility vehicles). The law placed responsibility on the National Highway Traffic and Safety Administration, a part of the U.S. Department of Transportation (USDOT), for establishing and regularly updating vehicle standards. The U.S. Environmental Protection Agency (US EPA) administers the Corporate Average Fuel Economy (CAFE) program, which determines vehicle manufacturers' compliance with existing fuel economy standards. Since the inception of the program, the average fuel economy for new light-duty vehicles steadily increased from 13.1 miles per gallon (mpg) for the 1975 model year to 30.7 mpg for the 2014 model year and can increase to 54.5 by 2025.

On August 2, 2018, the NHTSA and US EPA, operating under the direction of the Trump Administration, proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule). This rule addresses emissions and fuel economy standards for motor vehicles and is separated into two parts as described below.

- Part One, "One National Program" (84 FR 51310) revokes a waiver granted by US EPA to the State of California under Section 209 of the CAA to enforce more stringent emission standards for motor vehicles than those required by US EPA for the explicit purpose of GHG reduction, and indirectly, criteria air pollutants and ozone precursor emission reduction. This revocation became effective on November 26, 2019, potentially restricting the ability of CARB to enforce more stringent GHG emission standards for new vehicles and set zero emission vehicle mandates in California.
- Part Two addresses CAFE standards for passenger cars and light trucks for model years 2021 to 2026. This rulemaking proposes new CAFE standards for model years 2022 through 2026 and would amend existing CAFE standards for model year 2021. The proposal would retain the model year 2020 standards (specifically, the footprint target curves for passenger cars and light trucks) through model year 2026. The proposal addressing CAFE standards was jointly developed by NHTSA and US EPA, with US EPA simultaneously proposing tailpipe CO_2 standards for the same vehicles covered by the same model years.

Energy Policy and Conservation Act

Enacted in 1975, this legislation established fuel economy standards for new light-duty vehicles (autos, pickups, vans, and sport-utility vehicles). The law placed responsibility on the National Highway Traffic and Safety Administration, a part of the U.S. Department of Transportation (USDOT), for establishing and regularly updating vehicle standards. The U.S. Environmental Protection Agency (US EPA) administers the Corporate Average Fuel Economy (CAFE) program, which determines vehicle manufacturers' compliance with existing fuel economy standards. Since the inception of the program, the average fuel economy for new light-duty vehicles steadily increased from 13.1 miles per gallon (mpg) for the 1975 model year to 30.7 mpg for the 2014 model year and can increase to 54.5 by 2025.

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State Regulations

Pavley Regulations and Fuel Efficiency Standards (AB 1493)

AB 1493 (2002), California's Advanced Clean Cars program (referred to as Pavley), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, US EPA granted the waiver of the Clean Air Act preemption to California for its GHG emission standards for motor vehicles beginning with the 2009 model year. Pavley I regulates model years from 2009 to 2016, and Pavley II, which is now referred to as "Low Emission Vehicle (LEV) III GHG", regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the LEV, Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs, and would provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels.

California Global Warming Solutions Act (AB 32 and SB 32) and 2008, 2012, and 2017 California Climate Change Scoping Plans

The "California Global Warming Solutions Act of 2006," (AB 32), outlines California's major legislative initiative for reducing GHG emissions. AB 32 codified the Statewide goal of reducing GHG emissions to 1990 levels by 2020 and required CARB to prepare a California Climate Change Scoping Plan that outlined the main state strategies for reducing GHG emissions to meet the 2020 deadline. In addition, AB 32 required CARB to adopt regulations to require reporting and verification of Statewide GHG emissions. Based on this guidance, CARB approved a 1990 Statewide GHG level and 2020 target of 431 million metric tons (MMT of CO_2e), which was achieved in 2016. CARB approved the Scoping Plan on December 11, 2008 that included GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among others. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since the Scoping Plan's approval.

CARB approved the 2013 Scoping Plan update in May 2014. The update defined the CARB climate change priorities for the following five years, set the groundwork to reach post-2020 Statewide goals, and highlighted California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the State's longer

term GHG reduction strategies with other State policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use.

On September 8, 2016, the governor signed Senate Bill (SB) 32 into law, extending the California Global Warming Solutions Act by requiring the State to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan update, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation, such as SB 1383 and SB 100. The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with Statewide per capita goals of six metric tons (MT) of CO_2e by 2030 and two MT of CO_2e by 2050.

California Climate Crisis Act (AB 1279) and 2022 California Climate Change Scoping Plan

The California Climate Crisis Act (AB 1279), signed into law on September 16, 2022, requires the State to achieve and maintain net zero GHG emissions as soon as possible, but not later than 2045. The Climate Crisis Act also requires the State to reduce Statewide anthropogenic GHG emissions to 85 percent below the 1990 levels by 2045. Updates to the scoping plan are required to identify and recommend measures to achieve these goals and identify and implement policies and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies in the State.

In response to the passage of AB 1279 and the identification of the 2045 GHG reduction target, CARB published the 2022 Scoping Plan in November 2022. The 2022 Update builds upon the framework established by the original 2008 Scoping Plan and previous updates while identifying new, technologically feasible, cost-effective, and equity-focused path to achieve California's climate target. The 2022 Scoping Plan includes policies to achieve a significant reduction in fossil fuel combustion, further reductions in short-lived climate pollutants, support for sustainable development, increased action no natural and working lands (NWL) to reduce emissions and sequester carbon, and the capture and storage of carbon.

The 2022 Scoping Plan assesses the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in the 2017 Scoping Plan, extends and expands upon these earlier plans implements a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045, and takes an additional step of adding carbon neutrality as a science-based guide for California's climate work. As stated in the 2022 Scoping Plan, the plan outlines how carbon neutrality can be achieved by taking bold steps to reduce GHGs to meet the anthropogenic emissions target and by expanding actions to capture and store carbon through the State's NWL and using a variety of mechanical approaches. Specifically, the 2022 Scoping Plan includes the following:

- Identifies a path to keep California on track to meet its SB 32 GHG reduction target of at least 40 percent below 1990 emissions by 2030.
- Identifies a technologically feasible, cost-effective path to achieve carbon neutrality by 2045 and a reduction in anthropogenic emissions by 85 percent below 1990 levels.

- Focuses on strategies for reducing California's dependency on petroleum to provide consumers with clean energy options that address climate change, improve air quality, and support economic growth and clean sector jobs.
- Integrates equity and protecting California's most impacted communities as driving principles throughout the document.
- Incorporates the contribution of NWL to the state's GHG emissions, as well as their role in achieving carbon neutrality.
- Relies on the most up-to-date science, including the need to deploy all viable tools to address the existential threat that climate change presents, including carbon capture and sequestration, as well as direct air capture.
- Evaluates the substantial health and economic benefits of taking action.
- Identifies key implementation actions to ensure success.

In addition to reducing emissions from transportation, energy, and industrial sectors, the 2022 Scoping Plan includes emissions and carbon sequestration in NWL and explores how NWL contribute to long-term climate goals. Under the Scoping Plan Scenario, California's 2030 emissions are anticipated to be 48 percent below 1990 levels, representing an acceleration of the current SB 32 target. The 2022 Scoping Plan approaches decarbonization from two perspectives, managing a phasedown of existing energy sources and technologies, as well as increasing, developing, and deploying alternative clean energy sources and technology.

100 Percent Clean Energy Act (SB 100)

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the State's Renewables Portfolio Standard Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045. PCE provides clean energy that is 100 percent carbon free, either sourced entirely from renewable energy (50 percent solar and 50 percent wind) or 52.2 percent renewable (including biomass & waste, geothermal, small hydroelectric, solar, and wind). PCE aims to provide only 100 percent renewable by 2025. (PCE 2022). PG&E's default power mix offers 29 percent renewable, and they offer customers options for 64 percent or 100 percent renewable power mixes.

Sustainable Communities and Climate Protection Act (SB 375)

SB 375, signed in August 2008, enhances the State's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. In addition, SB 375 directs each of the State's 18 major Metropolitan Planning Organizations (MPOs) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. Southern California Association of Governments (SCAG) was assigned targets of an 8 percent reduction in GHGs from transportation sources by 2020 and a 19 percent reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

CEQA Guidelines Update (SB 97)

SB 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in CEQA documents. In March 2010, the California Natural Resources Agency adopted amendments to the CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG emissions and climate change impacts.

California Code of Regulations Title 24 (California Building Code)

Updated every three years through a rigorous stakeholder process, Title 24 of the California Code of Regulations requires California homes and businesses to meet strong energy efficiency measures, thereby lowering their energy use. Title 24 contains numerous subparts, including Part 1 (Administrative Code), Part 2 (Building Code), Part 3 (Electrical Code), Part 4 (Mechanical Code), Part 5 (Plumbing Code), Part 6 (Energy Code), Part 8 (Historical Building Code), Part 9 (Fire Code), Part 10 (Existing Building Code), Part 11 (Green Building Standards Code), Part 12 (Referenced Standards Code). The California Building Code is applicable to all development in California. (Health and Safety Code §§ 17950 and 18938(b).) The regulations receive input from members of industry, as well as the public, with the goal of "[r]educing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy." (Pub. Res. Code § 25402.) These regulations are scrutinized and analyzed for technological and economic feasibility (Pub. Res. Code § 25402(d)) and cost effectiveness (Pub. Res. Code § 25402(b)(2) and (b)(3)). The current iteration is the 2022 Title 24 standards. The California Building Standards Code's energy-efficiency and green building standards are outlined below.

PART 6 – BUILDING ENERGY EFFICIENCY STANDARDS/ENERGY CODE

CCR Title 24, Part 6 is the Building Energy Efficiency Standards or California Energy Code. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy demand. New construction and major renovations must demonstrate their compliance with the current 2022 Energy Code through submittal and approval of a Title 24 Compliance Report to the local building permit review authority and the California Energy Commission (CEC).

PART 11 – CALIFORNIA GREEN BUILDING STANDARDS

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11, first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 California Building Standards Code). The 2022 CALGreen includes mandatory minimum environmental performance standards for all ground-up new construction of residential and non-residential structures. It also includes voluntary tiers with stricter environmental performance standards for these same categories of residential and non-residential buildings. Local jurisdictions must enforce the minimum mandatory CALGreen standards and may adopt additional amendments for stricter requirements.

Assembly Bill 341/Assembly Bill 1826 (Mandatory Recycling/Composting)

The California Integrated Waste Management Act of 1989, as modified by AB 341, requires each jurisdiction's source reduction and recycling element to include an implementation schedule that shows diversion away from landfills of 75 percent of all solid waste by 2020 and annually thereafter.

AB 1826 requires recycling of organic waste (i.e., composting). All businesses and public entities that generate four or more cubic yards of solid waste per week and multi-family residential dwellings that have five or more units are required to recycle and compost.

Renewable Portfolio/Clean Energy and Pollution Reduction Act (SB 350/100)

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. This act also requires doubling of the energy efficiency in existing buildings by 2030.

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the State's Renewables Portfolio Standard Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 44 percent by 2024, 60 percent by 2030, and 100 percent by 2045.

Assembly Bill 1493 (Reduce GHG Emissions from Vehicle Use)

AB 1493 (Chapter 200, Statutes of 2002), known as the Pavley Bill, amended Health and Safety Code Sections 42823 and added 43018.5 requiring CARB to develop and adopt regulations that achieve maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles, light-duty trucks, and other vehicles used for noncommercial personal transportation in California.

Assembly Bill 1007 (State Alternative Fuels Plan)

AB 1007 (Chapter 371, Statutes of 2005) required the CEC to prepare a State plan to increase the use of alternative fuels in California. The CEC prepared the State Alternative Fuels Plan (SAF Plan) in partnership with CARB and in consultation with other federal, State, and local agencies. The SAF Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The SAF Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-State production of biofuels without causing a significant degradation of public health and environmental quality.

CARB In-Use On-Road and Off-Road Diesel Rules

The CARB rule imposes limits on idling, restricts the addition of older vehicles, and requires the retirement or replacement of older engines depending on their fleet size category. This policy indirectly impacts energy consumption. More specifically, CARB is also charged with developing air pollution control regulations based upon the best available control measures and implementing feasible control measures under the State and Federal Clean Air Act. (Health & Saf. Code, §§ 39602.5, 39667, 43013, subds. (a) and (h), 43018, 40600, 40601, 40612(a)(2) and (c)(1)(A).) Pursuant to these statutory authorities , more stringent emission standards were adopted in 2004 for off-road construction equipment (i.e. "Tier 4" standards) (40 Code of Federal Regulations Parts 1039, 1065, and 1068; Cal. Code Regs., tit. 13, § 2025; AR 2854). CARB also adopted emission standards for on-road heavy duty diesel vehicles (i.e. haul trucks). (Cal. Code Regs., tit. 13, § 1956.8.) These haul truck regulations mandate fleet turn-over to ensure that by January 1, 2023 nearly all on-road diesel trucks will have 2010 model year engines or equivalent [i.e. Tier 4]. In addition, interim steps

are incorporated into the regulations (e.g., vehicles older than 1999 will be replaced with newer engines by 2020).

California Advanced Clean Trucks Program

In March 2021, CARB approved the Advanced Clean Trucks regulation, which requires manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. In addition, the regulation requires company and fleet reporting for large employers and fleet owners with 50 or more trucks. By 2045, all new trucks sold in California must be zero-emission. Implementation of this regulation would reduce consumption of nonrenewable transportation fuels as trucks transition to alternative fuel sources.

California Advanced Clean Fleets Regulation

In April 2023, CARB approved the Advanced Clean Fleets (ACF) regulation. The ACF regulation is part of California's strategy to accelerate the adoption of medium- and heavy-duty zero-emission vehicles (ZEVs). It complements the Advanced Clean Trucks ACT regulation and aims to achieve public health, air quality, and climate goals. The ACF regulation applies to fleets performing drayage operations, those owned by State, local, and federal government agencies, and high priority fleets. The ACF regulation includes components such as a manufacturer sales mandate, drayage fleet registrations, requirements for drayage fleets to transition to zero-emission vehicles, and mandates for high priority and government fleets to purchase increasing percentages of ZEVs over time. The regulation provides flexibility and exemptions for cases where zero-emission trucks are not yet available. The ACF regulation is expected to significantly increase the number of ZEVs on California roads, leading to emissions reductions and health benefits. The Advanced Clean Trucks and ACF regulations together are expected to result in about 510,000, 1,350,000 and 1,690,000 ZEVs in California in 2035, 2045, and 2050, respectively.

Executive Order B-48-18 (Zero-Emission Vehicles)

On January 26, 2018, Governor Brown signed Executive Order B-48-18 requiring all State entities to work with the private sector to have at least 5 million zero-emission vehicles (ZEVs) on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle (EV) charging stations by 2025. It specifies that 10,000 of the EV charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 Hydrogen Station Permitting Guidebook to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan, along with the 2018 ZEV Action Plan Priorities Update, which includes and extends the 2016 ZEV Action Plan (Governor's Interagency Working Group on Zero-Emission Vehicles 2016, 2018), to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities.

Executive Order N-79-20 (Zero Emissions Vehicles Sales)

Governor Gavin Newsom signed Executive Order N-79-20 in September 2020, which sets a statewide goal that 100 percent of all new passenger car and truck sales in the State will be zero-emissions by 2035. It also sets a goal that 100 percent of statewide new sales of medium- and

heavy-duty vehicles will be zero emissions by 2045, where feasible, and for all new sales of drayage trucks to be zero emissions by 2035. Additionally, the Executive Order targets 100 percent of new off-road vehicle sales in the State to be zero emission by 2035. CARB is responsible for implementing the new vehicle sales regulation.

Senate Bill 1020

Senate Bill 1020 (SB 1020), signed into law on September 16, 2022, requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035, 95 percent by 2040, and 100 percent by 2045. All State agencies facilities must be served by 100 percent renewable and zero-carbon resources by 2030. SB 1020 also requires the Public Utilities Commission, Energy Commission, and CARB to issue a joint progress report outlining the reliability of the electrical grid with a focus on summer reliability and challenges and gaps. Additionally, SB 1020 requires the Public Utilities Commission to define energy affordability and use energy affordability metrics to develop protections, incentives, discounts, or new programs for residential customers facing hardships due to energy or gas bills.

CARB Gas Appliances Sales Ban

As part of the 2022 State Implementation Plan, CARB adopted a ban on new sales of natural gas heaters, water heaters, and furnaces by 2030 in September of 2022. This new measure is intended to reduce emissions from new residential and commercial space and water heaters sold in the State. An emission standard for space and water heaters will go into effect in 2030. Beginning in 2030, 100 percent of the sales of new natural gas-powered heaters and water heaters would need to comply with the emission standard, such as putting in electric heaters or other zero-emission options.

Regional and Local Regulations

Plan Bay Area 2050

Plan Bay Area 2050 is a State-mandated, integrated long-range transportation, land-use, and housing plan, known as a Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), that would support a growing economy, provide more housing and transportation choices and reduce transportation-related pollution in the nine-county San Francisco Bay Area. Plan Bay Area 2050 builds on earlier efforts to develop an efficient transportation network and grow in a financially and environmentally responsible way. Plan Bay Area 2050 focuses on advancing equity and improving resiliency in the Bay Area by creating strategies in the following four elements: Housing, Economy, Transportation, and Environment. The Plan discusses how the future is uncertain due to anticipated employment growth, lack of housing options, and outside forces, such as climate change and economic turbulence. These uncertainties will impact growth in the Bay Area and exacerbate issues for those who are historically and systemically marginalized and underserved and excluded. Thus, Plan Bay Area 2050 has created strategies and considered investments that will serve those systemically underserved communities and provide equitable opportunities. The Plan presents a total of 35 strategies to outline how the $1.4 trillion dollar investment would be utilized. The strategies include, but are not limited to, the following: providing affordable housing, allowing higher-density in proximity to transit-corridors, optimizing the existing roadway network, creating complete streets, providing subsides for public transit, reducing climate emissions, and expanding open space area. To bring these strategies to fruition, it will require participation by agencies, policymakers, and the public. An implementation plan is also included as part of the Plan to assess

the requirements needed to carry out the strategies, identify the roles of pertinent entities, create an appropriate method to implement the strategies, and create a timeline for implementation.

Contra Costa Countywide Transportation Plan

In 2017, the Contra Costa County Transportation Authority adopted the Contra Costa Countywide Transportation Plan (CTP) to provide a blueprint for Contra Costa County's transportation system over the coming decades. The CTP identifies projects, programs, and policies that the Contra Costa County Transportation Authority hopes to pursue. The CTP identifies goals for bringing together all modes of travel, networks and operators, to meet the diverse needs of Contra Costa County and to support Plan Bay Area. The CTP also lays out a vision for the future of transportation in Contra Costa County, the goals and strategies for achieving those visions, and the future of transportation investments needs to promote a growing economy, advance technological changes, protect the environment, and improve quality of life.

San Ramon Climate Action Plan

In 2011, the City adopted the San Ramon Climate Action Plan (CAP). The purpose of the CAP is to outline a course of action for the City government and the community of San Ramon to reduce GHG emissions 15 percent below 2008 levels by the year 2020 and adapt to effects of climate change, and provide clear guidance to City staff regarding when and how to implement key provisions of the CAP. The CAP includes implementation strategies related to land use, transportation, energy conservation, water conservation, waste reduction and recycling, and regional cooperation. San Ramon achieved its 2020 GHG reduction target.

San Ramon Municipal Code Title C

Title C, Division C1, C1-161 of the San Ramon Municipal Code incorporates by reference the 2022 California Green Building Standards Code (CALGreen), Title 24, Part 11.

3.6.4 Impacts and Mitigation Measures

Significance Criteria

The City of San Ramon utilizes the following 2022 *CEQA Guidelines* Appendix G significance criteria questions related to GHG Emissions and Energy.

Would the 2040 General Plan:

a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?
c) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
d) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Approach to Analysis

GHG Emissions

Based on plan-level guidance from the 2022 BAAQMD *CEQA Air Quality Guidelines,* GHG emissions associated with implementation of the 2040 General Plan are discussed qualitatively by comparing the proposed plan to the 2022 BAAQMD GHG thresholds. In addition, the proposed plan is qualitatively compared to other applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs.

Energy

Energy consumption is analyzed herein in terms of construction and operational energy. Construction energy demand accounts for anticipated energy consumption during construction of development facilitated by the proposed plan, such as fuel consumed by construction equipment and construction workers' vehicles traveling to and from the construction site. Operational energy demand accounts for the anticipated energy consumption during operation of the development facilitated by the proposed plan, such as fuel consumed by cars, trucks, and public transit; natural gas consumed for on-site power generation and heating building spaces; and electricity consumed for building power needs, including, but not limited to lighting, water conveyance, and air conditioning. This analysis considers the equipment and processes employed during construction and operation of development facilitated under the 2040 General Plan to qualitatively determine whether energy consumed during construction and operation would be wasteful, inefficient, or unnecessary. Operational transportation-related energy usage was calculated based on VMT, fleet mix averages, and fuel economy to determine daily fuel consumption. Energy calculations are included as Appendix C to this EIR. In addition, the proposed plan is qualitatively compared to applicable plans adopted for the purpose of reducing non-renewable and overall energy consumption.

EIR Scoping Comments Consideration

No comments relevant to CEQA were received in response to the EIR NOP specific to GHG emissions and energy that need to be addressed in the impacts discussion.

Specific Thresholds of Significance

GHG Emissions Generation

Individual projects do not generate sufficient GHG emissions to influence climate change directly. However, physical changes caused by a project can contribute incrementally to significant cumulative effects, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a plan or project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines Section 15064[h][1]).

At the plan level, the 2022 BAAQMD *CEQA Air Quality Guidelines* contains two approaches for determining significance of GHGs:

1. Evaluation of whether a plan or project meets State goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045; or
2. Evaluation of consistency with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

If a plan is not consistent with one of these approaches, it could be considered to have an incremental significant impact on GHG emissions.

According to CEQA Guidelines Section 15183.5 and the 2022 BAAQMD *CEQA Air Quality Guidelines*, a qualified GHG reduction strategy must:

- Quantify GHG emissions, both existing and projected over a specified period, resulting from activities in 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 in 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 amendment if the plan is not achieving specified levels; and
- Be adopted in a public process following environmental review.

The current San Ramon CAP was adopted in 2011 and outlines strategies to reduce GHG emissions by 2020; however, the CAP does not include GHG reduction goals consistent with 2030 and 2045 State goals. Therefore, the City of San Ramon has not adopted a qualified GHG reduction strategy or a plan that meets the revised State goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045.

Energy

The City of San Ramon does not have quantitative thresholds for evaluation of energy; however, the following qualitative thresholds are used to evaluate the significance of energy impacts resulting from implementation of the proposed plan if it would:

- Result in a wasteful, inefficient, and unnecessary consumption of energy during construction and operational activities; or if
- Construction and operation of buildings and appliances would not adhere to the energy-use reduction measures included in CALGreen.

Impact Evaluation

GHG Emissions Generation and GHG Reduction Plans Consistency

Significance Criterion a:	Would the proposed plan generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
Significance Criterion b:	Would the proposed plan conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

Impact GHG-1 SAN RAMON DOES NOT HAVE A CLIMATE ACTION PLAN THAT INCLUDES TARGETS TO MEET STATE 2030 AND 2045 GOALS. THEREFORE, IMPLEMENTATION OF THE 2040 GENERAL PLAN WOULD NOT MEET STATE 2030 AND 2045 GOALS. MITIGATION MEASURE GHG-1 WOULD RESULT IN ADOPTION OF SAN RAMON CEQA GHG THRESHOLDS AND A CLIMATE ACTION PLAN. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Construction

Development facilitated by the 2040 General Plan would result in GHG emissions during construction. GHG emissions during construction would result primarily from fuel consumption associated with heavy equipment, light-duty vehicles, machinery, and generators for lighting. Temporary grid power may also be provided to construction trailers or electric construction equipment that may result in indirect GHG emissions from the energy generation. Development facilitated by the 2040 General Plan would incorporate BAAQMD best management practices to reduce GHG emissions during construction activities. Development facilitated by the 2040 General Plan would also utilize construction contractors that comply with applicable CARB regulations such as accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment, and restricted idling of heavy-duty diesel motor vehicles. Construction contractors are required to comply with the provisions of CCR Title 13, sections 2449 and 2485, prohibiting diesel-fueled commercial and off-road vehicles from idling for more than five minutes, minimizing unnecessary GHG emissions. Construction equipment would be subject to the US EPA Construction Equipment Fuel Efficiency Standard, which would minimize inefficient fuel consumption and thus GHG emissions. These construction equipment standards (i.e., Tier 4 efficiency requirements) are contained in 40 Code of Federal Regulations Parts 1039, 1065, and 1068. Per applicable regulatory requirements of CALGreen, development facilitated by the 2040 General Plan would comply with construction waste management practices to divert construction and demolition debris from landfills. These practices would result in efficient use of energy by construction facilitated by the 2040 General Plan and, therefore, would minimize unnecessary GHG emissions. Furthermore, in the interest of cost efficiency, construction contractors would not utilize fuel in a manner that is wasteful or unnecessary, which would also have the effect of minimizing GHG emissions.

Pursuant to the 2022 BAAQMD *CEQA Air Quality Guidelines*, BAAQMD does not recommend a construction-related climate impact threshold. According to BAAQMD, GHG emissions from construction represent a very small portion of a project's lifetime GHG emissions. The proposed thresholds for land use projects are designed to address operational GHG emissions that represent the vast majority of project GHG emissions. Therefore, the evaluation of GHG emissions impacts associated with implementation of the 2040 General Plan is focused on operational emissions, discussed below.

Operation

GHG EMISSIONS GENERATION

Development facilitated by the 2040 General Plan would result in GHG emissions during operation. GHG emissions during operation would result primarily from building energy usage and transportation fuel consumption associated with light-duty vehicles. The 2040 General Plan contains policies that aim to increase connectivity and promote travel by alternative modes, and increase energy efficient building related energy use and renewable energy sources to reduce operational GHG emissions. 2040 General Plan Land Use Element, Housing Element, Traffic and Circulation Element, Air Quality and Greenhouse Gas Element, Growth Management Element, Economic Development, and Public Facilities and Utilities Element guiding policies and implementing policies related to GHG emissions reductions include:

Land Use Element

Guiding Policy 4.6-G-1: Foster a pattern of development and encourage a compatible mix of land uses that enhances the character of the City and the community.

Policy 4.6-I-24 Promote redevelopment with a mix of high-density residential, retail, and other compatible non-retail uses in the Mixed Use General Plan land use designation.

Policy 4.6-I-30 Allow a diverse mix of complementary uses within Bishop Ranch (including locations within CityWalk and North Camino Ramon Specific Plan) to better meet the daily needs of workers and to reduce the need to travel by automobile. Complementary uses shall be consistent with site zoning, compatible with the primary use and shall not adversely affect the traffic-carrying capacity of adjacent streets.

Housing Element

Guiding Policy GP 11.5.1-1: Provide a diversity of housing types and affordability levels within San Ramon to meet the needs of community residents.

Policy IP 11.5.1-2 Develop target density to encourage higher yield of units in all residential and mixed use zones.

Policy IP 11.5.1-26 Encourage infill housing development projects (including senior housing) near employment, shops/services, and transportation corridors, particularly within the City's core and Priority Development Areas.

Guiding Policy GP 11.5.4-1: Promote climate change goals through energy conserving practices in the location, construction, renovation, and maintenance of San Ramon's housing units.

Policy IP 11.5.4-2 Promote a combination of residential, retail, and office uses in areas designated for mixed use to reduce Vehicle Miles Traveled.

Policy IP 11.5.4-6 Disseminate information and support efforts by public utilities to encourage home conservation practices.

Traffic and Circulation Element

Guiding Policy 5.2-G-1: Actively participate in local and regional transportation planning.

Policy 5.2-I-7 Pursue regional air quality and greenhouse gas reduction objectives through effective management of the City's transportation system.

Guiding Policy 5.3-G-1: Encourage transportation facilities that consider the users' safety and allow for all modes of travel based on local conditions and needs of the community.

Policy 5.3-I-5 Encourage Complete Streets concepts as a vehicle-miles-traveled and greenhouse gas reduction strategy.

Guiding Policy 5.6-G-1: Utilize Transportation Demand Management (TDM) strategies as an integral component of the City's transportation program to reduce total vehicle trips on San Ramon roadways and reduce the corresponding vehicle emissions that promote regional air quality improvements.

Policy 5.6-I-1 Engage with public agencies and other jurisdictions to promote local and regional public transit service in San Ramon as part of a multimodal and Complete Streets strategy.

Policy 5.6-I-2 Encourage and assist major employers and property managers of commercial sites with 50 or more employees to reduce the number of single-occupant vehicles by participating in the City's TDM programs, including the commuter benefit program, and programs provided by the Bay Area Air Quality Management District.

Policy 5.6-I-3 Encourage additional local bus or other public transportation service providers to and from regional transit lines. The City shall strive to improve the transit service to and from all neighborhoods and commercial districts in San Ramon.

Policy 5.6-I-4 Preserve options for future public transit and alternative transportation uses when designing improvements for roadways such as Bollinger Canyon Road Corridor within Dougherty Valley.

Policy 5.6-I-5 Encourage future transit uses within the I-680 corridor right-of-way and within the City of San Ramon.

Policy 5.6-I-6 Engage with other jurisdictions and agencies to coordinate the City's TDM programs with regional plans and action plans that are aimed at reducing traffic congestion and improving air quality.

Policy 5.6-I-7 Encourage new development to include a mix of uses and Complete Streets concepts that will allow people to walk and bike between destinations and reduce the amount of automobile vehicle-miles-traveled.

Policy 5.6-I-8 Encourage alternative public transportation programs and obtain funding for new TDM projects or programs.

Policy 5.6-I-9 Encourage employers and commercial complexes to emphasize public transit services or private alternatives to the single-occupant vehicle.

Policy 5.6-I-10 Work with transit providers to situate amenity rich transit stops and shelters at convenient and safe locations.

Policy 5.6-I-11 Promote increased transit ridership through the use of Transportation Management Associations and other employer-based transit programs, equip buses with three slot bike racks, and make transit information readily accessible in a smart phone friendly format.

Policy 5.6-I-12 Coordinate with Caltrans and transit providers to identify and implement park and ride lots with updated amenities with convenient access to public transit often called Mobility Hubs.

Policy 5.6-I-13 Work with the San Ramon Valley Unified School District and other appropriate agencies and organizations to reduce vehicle trips through the provision of transit programs, the TRAFFIX School Bus Program and promoting carpooling, bicycling, and walking.

Policy 5.6-I-14 Consider strategies such as shared parking, parking management plans (including valet parking), transit connected satellite parking and/or the construction of public parking facilities in the City Center or other commercial areas to serve projected parking demand, while carefully balancing the need for adequate parking against the desire to minimize traffic growth and create a pedestrian/bicycle friendly environment using Complete Streets design concepts.

Policy 5.6-I-15 Work with local transit providers to increase and expand weekend transit service and late night Owl service from regional rail and transit hubs.

Policy 5.6-I-16 Explore opportunities for the location or relocation of a transit center and/or multiple Mobility Hubs within Bishop Ranch Business Park to better geographically balance the public transit needs for the City.

Guiding Policy 5.6-G-2: Encourage trip reduction measures in an effort to reduce vehicle-miles-traveled, improve air quality, and reduce greenhouse gas emissions.

Policy 5.6-I-17 Encourage “Park Once” concepts as a vehicle-miles-traveled reduction strategy for mixed-use, commercial, and public facilities through the integration of common design features and shared parking concepts including but not limited to Parking Benefit Districts.

Policy 5.6-I-18 Encourage shared parking facilities and parking reductions for compatible land uses to minimize excessive parking to reduce inefficient use of land, unnecessary pavement and stormwater runoff, and encourage alternative transportation and reductions in vehicle-miles-traveled.

Policy 5.6-I-19 Encourage infill, Transit-Oriented Development (TOD) and first and last mile transit access connections as vehicle-miles-traveled reduction strategies for existing and proposed development.

Guiding Policy 5.7-G-1: Encourage bicycling and walking as alternatives to driving, consistent with Complete Streets concepts.

Policy 5.7-I-1 Establish a network of on- and off-street bicycle routes to encourage their use for commute, recreational, and other trips. Improve and expand bicycle routes for commuters in San Ramon and between San Ramon and neighboring cities.

Policy 5.7-I-2 Develop bicycle routes that provide access to regional employment centers, shopping centers, public facilities, transit centers, schools, and parks.

Policy 5.7-I-3 Continue to emphasize the Iron Horse Trail as a major north-south route for non-motorized modes of transportation including walking, biking, rollerblading and scooters by improving connectivity and enhancing amenities for these modes.

Policy 5.7-I-5 Require bicycle parking, storage and other support facilities as part of new office, retail, housing, and public facilities developments.

Policy 5.7-I-6 Continue to promote and implement through the development review process, continuous circulation facilities within commercial districts and residential neighborhoods to enhance connectivity and promote pedestrian and bicycle modes of transportation consistent with Complete Streets concepts.

Policy 5.7-I-8 Pursue grant funding for implementation of projects identified in the adopted Bicycle Master Plan and Walking District Master Plan, including funding from State and regional sources.

Policy 5.7-I-9 Implement roadway improvement projects to minimize both temporary and permanent reductions in bicycle and pedestrian mobility and/or accessibility.

Policy 5.7-I-10 Work with neighboring jurisdictions to ensure that continuity in bicycle and pedestrian networks is provided at jurisdictional boundaries.

Policy 5.7-I-11 Work with Caltrans and other appropriate agencies to improve bicycle and pedestrian mobility at freeway crossings.

Policy 5.7-I-13 Prioritize bicycle network improvements in the core area of San Ramon, including construction of new facilities and actions to remove barriers to cycling as identified in the San Ramon Bicycle Master Plan, in order to support development in the City's Priority Development Areas (PDAs).

Air Quality and Greenhouse Gas Element

Guiding Policy 12.4-G-1: Work with the California Air Resources Board and the Bay Area Air Quality Management District to improve air quality in the region and San Ramon to meet State and federal ambient air quality standards.

Policy 12.4-I-2 Encourage coordination with the California Air Resources Board (CARB) and the Bay Area Air Quality Management District (BAAQMD) in monitoring the City's progress in meeting greenhouse gas emissions targets.

Policy 12.4-I-3 Utilize the CEQA process for applicable regulatory guidance; such as the BAAQMD's CEQA Air Quality Guidelines to disclose potential air quality and climate change impacts from discretionary projects under City review.

Policy 12.4-I-4 Use the City's environmental review process to require mitigation measures, as applicable, consistent with the Climate Action Plan (CAP) for new development to reduce impacts from greenhouse gas emissions and hazardous air pollutants.

Policy 12.4-I-5 Comply with the regional Clean Air Plan by locally implementing BAAQMD best management practices and greenhouse gas reductions consistent with the targets identified in the San Ramon CAP.

Policy 12.4-I-6 Educate residents on the linkage between land use, transportation, and their impacts on water, energy use, and air pollution. Efforts should include educational materials through a variety of effective and engaging platforms and venues.

Guiding Policy 12.5-G-1: Reduce greenhouse gas emissions and improve air quality by encouraging development that integrates land use and transportation planning principles through the creation of compact, mixed-use neighborhoods that are bike and pedestrian-friendly.

Policy 12.5-I-2 Support and encourage projects proposing infill, and mixed-use development that create walkable and bicycle friendly neighborhoods and communities that increase access to transit.

Policy 12.5-I-3 Implement the Growth Management program to assess new development project impacts on transit plans and facilities to minimize impacts from greenhouse gases and air pollution.

Policy 12.5-I-4 Consider the City's jobs to housing ratio when approving development applications to reduce VMT to below the significance threshold.

Guiding Policy 12.7-G-1: Reduce greenhouse gas emissions by shifting to multi-modal transportation systems, and zero-emission and low-emission vehicles and car-sharing programs by enhancing existing infrastructure and improving multi-modal infrastructure options.

Policy 12.7-I-1 The City shall encourage participation in feasible, affordable, innovative and flexible employer-based trip reduction programs for employees and encourage employer and resident participation in employer-based trip reduction programs, including, but not limited to the BAAQMD Commuter Benefit Program.

Policy 12.7-I-2 City fleet vehicle managers shall develop and maintain a fiscally sound plan to transition to cleaner fleets with a conversion schedule, where feasible, enacted by an adopted Green Vehicle Procurement Policy.

Policy 12.7-I-3 Work with telecommunications companies to develop state-of-the-art telecommunications infrastructure within the city, including broadband access and neighborhood work centers for telecommuting to reduce vehicular commute travel and related emissions.

Policy 12.7-I-4 Provide information to encourage the use of transportation modes that minimize vehicle miles travelled and the resulting reduction in air pollution and greenhouse gas emissions.

Policy 12.7-I-5 Construct and promote infrastructure and facilities that support and encourages the use of low-emission transportation and alternative modes of travel, including safe and comprehensive bicycle and pedestrian system that connects all parts of the city and development standards that require installation of alternative fuel infrastructure, such as electric vehicle chargers and hydrogen fueling stations.

Guiding Policy 12.8-G-1: Minimize emissions and potential climate change impacts related to energy consumption through government operations and the built environment.

Policy 12.8-I-5 Encourage responsible development standards that, where reasonably available, use reclaimed water and non-potable water sources for particulate matter control, including landscaping and construction activities such as fugitive dust control. The development standards shall require new development areas that will be foreseeably served with recycled water to be plumbed with a "purple pipe" system to facilitate the future use of recycled water for landscape irrigation.

Policy 12.8-I-8 Encourage use of materials developed with recycled materials as well as recycling and composting in order to reduce materials being sent to landfills.

Policy 12.8-I-9 Provide recycling programs to directly accept or connect construction companies with those who accept construction and demolition debris, and provide resources on where recycled materials can be procured for local use.

Policy 12.8-I-10 Engage with residents, businesses, haulers, solid waste facilities and local food banks to educate community members and stakeholders on SB 1383 requirements to reduce methane emissions that would otherwise be generated from disposed organic waste at landfills.

Guiding Policy 12.9-G-1: Reduce the City's proportionate contribution of greenhouse gas emissions derived from municipal operations.

Policy 12.9-I-1 Strive to reduce greenhouse gas emissions from its internal governmental operations and land use activities within its authority to 40 percent below 1990 levels by 2030 and reaching carbon neutrality by 2045. The City will also work with MTC to ensure that the City receives its proportionate fair share reduction in greenhouse gas emissions as may be identified under the provisions of SB 375 (2008 Chapter 728) for any projects or activities requiring approval by MTC.

Policy 12.9-I-2 Keep current and maintain the City's adopted Climate Action Plan (CAP) as an implementation strategy of the General Plan 2040.

Policy 12.9-I-3 Conduct regular reviews of San Ramon's progress towards meeting greenhouse gas emission reduction targets established in the San Ramon CAP by annually tracking and reporting on communitywide GHG emissions and updating the GHG emissions inventory and CAP every 4 to 8 years.

Policy 12.9-I-4 Meet with other local and regional governments to assess federal and state programs and their impact on greenhouse gas emissions and mitigation efforts and revise the CAP as necessary.

Policy 12.9-I-5 Develop, adopt, and utilize a locally applicable CAP and CEQA significance thresholds consistent with BAAQMD CEQA GHG guidance for the evaluation of plan and project-level greenhouse gas emissions impacts and implementation of identified mitigation.

Growth Management Element

Guiding Policy 3.3-G-1: Maintain acceptable traffic LOS on City streets and roadways through implementation of Transportation Demand Management (TDM), Growth Management, the Capital Improvement Program, and traffic engineering operational measures.

Policy 3.3-I-6 Support regional and local neighborhood transit options to reduce the use of the automobile and maintain acceptable traffic levels of service.

Guiding Policy 3.3-G-1: Utilize Transportation Demand Management (TDM) strategies as an integral component of the City's transportation program to reduce total vehicle trips on San Ramon roadways and reduce the corresponding vehicle emissions that promote regional air quality improvements.

Policy 3.4-I-1 Continue to implement the City's TDM Program to reduce trip generation.

Policy 3.4-I-2 Work with 511 Contra Costa, other jurisdictions, and agencies to coordinate the City's TDM Program with regional TDM programs and activities.

Policy 3.4-I-3 Cooperate with regional and local service providers and other jurisdictions to promote local and regional public transit service.

Policy 3.4-I-4 Support local feeder transit service to and from current and future regional transit lines.

Policy 3.4-I-5 Preserve options for future transit use when designing improvements for roadways.

Policy 3.4-I-6 Locate future transit uses, such as light rail or BART, in the I-680 right-of-way.

Policy 3.4-I-7 Improve and expand the bicycle route network in San Ramon.

Guiding Policy 3.5-G-1: Participate in regional cooperative and multi-jurisdictional transportation planning for the maintenance of regional mobility and air quality standards as required by the Measure J Growth Management Program and the Contra Costa Congestion Management Plan (CMP).

Policy 3.5-I-4 Emphasize regional transportation demand management and trip reduction strategies as alternatives to increased roadway capacity.

Guiding Policy 3.6-G-1: Promote the opportunity to both work and live in San Ramon through implementation of the Housing Element.

Policy 3.6-I-4 As part of the development review process, support the accommodation of public transit, bicycle, and pedestrian access for new development.

Economic Element

Guiding Policy 2.3-G-1: Foster a climate in which businesses can prosper.

Policy 2.3-I-6 Encourage housing on infill sites in the City's two PDAs (City Center and North Camino Ramon), where flat terrain and proximity to employment, shops and services favors walking, bicycling and travel by other modes than single-occupant vehicle.

Guiding Policy 2.3-G-2: Provide adequate land use designations to accommodate planned development, with business and commercial areas complementing residential and public development in location/access, mix of uses, attractiveness, and environmental quality.

Policy 2.3-I-13 Promote and encourage public transit, carpool and vanpool opportunities into San Ramon's business areas.

Policy 2.3-I-14 Encourage and facilitate non-motorized means of transportation to business areas.

Policy 2.3-I-18 Encourage businesses to promote the use of commute alternatives among their employees by implementing the City's Transportation Demand Management (TDM) programs.

Public Facilities and Utilities Element

Guiding Policy 7.5-G-1: Manage solid waste so that State goals are met or are exceeded and the best possible service is provided to the citizens and businesses of San Ramon.

Policy 7.5-I-3 Develop consumer friendly, convenient, affordable options for community-serving recycling services.

Policy 7.5-I-8 Require solid waste diversion (e.g. waste prevention, reuse, recycling, and composting).

Policy 7.5-I-9 Require new development projects to comply with the Municipal Code's construction and demolition debris diversion requirements.

Policy 7.5-I-10 Provide convenient recycling opportunities at large public events and venues.

The 2040 General Plan is a policy-level document that guides land use and development throughout San Ramon. While the 2040 General Plan would facilitate additional development within the San Ramon Planning Area, building energy consumption and VMT (and thus air pollution), water consumption, and solid waste generation per capita would be reduced under the 2040 General Plan buildout compared to existing conditions. However, total GHG emissions communitywide would incrementally increase in conjunction with increased overall buildings and VMT. Therefore, 2040 General Plan operational impacts related to generation of GHG emissions would be potentially significant.

CONSISTENCY WITH STATE GHG REDUCTION PLANS

The CARB 2022 Climate Change Scoping Plan outlines a pathway to achieving the 2030 reduction target set under California Senate Bill (SB) 32, which is considered an interim target toward meeting the longer-term 2045 carbon neutrality target set under California Assembly Bill (AB) 1279. In addition, the CARB 2022 Scoping Plan outlines a path to achieving carbon neutrality and reduction of anthropogenic GHG emissions by 85 percent below 1990 levels by 2045 set under AB 1279. Furthermore, 2040 General Plan Policy 12.9-I-5 in the Air Quality and Greenhouse Gas Element calls for the City of San Ramon to develop, adopt, and utilize a locally applicable CAP and CEQA significance thresholds consistent with BAAQMD CEQA GHG guidance for the evaluation of plan and project-level greenhouse gas emissions impacts and implementation of identified mitigation. However, the City does not currently have a CAP that has outlined methods and policies to meet the State 2030 and 2045 targets or reduce total GHG emissions communitywide. As such, the 2040 General Plan would not be consistent with the SB 32 GHG reduction target for 2030, the AB 1279 GHG reduction target for 2045, or the 2022 California Climate Change Scoping Plans. Therefore, 2040 General Plan operational impacts related to consistency with State GHG reduction plans would be potentially significant.

CONSISTENCY WITH REGIONAL GHG REDUCTION REGULATIONS

As discussed above, the 2040 General Plan would not comply with the 2022 BAAQMD *CEQA Air Quality Guidelines*, which requires an evaluation of whether the plan would meet State goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045 or an evaluation of consistency with a qualified local GHG reduction strategy. While the 2040 General Plan includes the aforementioned policies, since there is no qualified GHG reduction strategy specific to San Ramon for achieving 2030 and 2045 State targets, there is no established mechanism for the City to demonstrate compliance with meeting the latest State and BAAQMD targets to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045. Therefore, 2040 General Plan operational impacts related to consistency with regional GHG reduction regulations would be potentially significant.

CONSISTENCY WITH LOCAL GHG REDUCTION PLAN

Consistency with the current San Ramon CAP is outlined below in Table 3.6-5 for informational purposes. However, since the 2011 San Ramon CAP does not incorporate 2030 and 2045 State targets, there is no established mechanism for the City to demonstrate compliance with meeting the latest State and BAAQMD targets to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045. Therefore, 2040 General Plan operational impacts related to consistency with local GHG reduction regulations would be potentially significant.

Table 3.6-5 San Ramon 2011 CAP Consistency Analysis – 2040 General Plan

Strategy	Consistency
Land Use	
Strategy LU-2. Encourage mixed use development in new development and redevelopment areas.	**Consistent**: Development of the 2040 General Plan would promote mixed-use development through the following proposed Land Use Element and Housing Element policies: **Policy 4.6-I-23:** Promote redevelopment with a mix of high-density residential, retail, and other compatible non-retail uses in the Mixed Use General Plan land use designation. **Policy 4.6-I-25:** Promote incentives that will provide for density and FAR bonuses for mixed-use development that includes amenities for public benefit, such as workforce housing, pedestrian-oriented facilities (outdoor seating, plazas, weather protection, transit waiting areas), historic preservation, cultural facilities, public art and water features, and open space preservation. Inclusionary housing requirements would apply. **Policy 11.5.1-2:** Develop target density to encourage higher yield of units in all residential and mixed use zones.
Strategy LU-3. Increase transit orientation in new development and redevelopment areas near current and planned transit facilities. **Strategy T-1.** Provide transit facilities and services that improve transit mode share.	**Consistent.** Proposed Goal 5.6-G-1 of the Traffic and Circulation Element focuses on reducing vehicle trips and vehicle emissions by utilizing Transportation Demand Management (TDM) strategies. In particular, the following policies would encourage improved transit access and mode share and regional transit connections in San Ramon: **Policy 3.4-I-3:** Cooperate with regional and local service providers and other jurisdictions to promote local and regional public transit service. **Policy 3.4-I-4:** Support local feeder transit service to and from current and future regional transit lines. **Policy 3.4-I-5:** Preserve options for future transit use when designing improvements for roadways. **Policy 3.4-I-6:** Locate future transit uses, such as light rail or BART, in the I-680 right-of-way **Policy 5.6-I-1:** Engage with public agencies and other jurisdictions to promote local and regional public transit service in San Ramon as part of a multimodal and Complete Streets strategy. **Policy 5.6-I-3:** Encourage additional local bus or other public transportation service providers to and from regional transit lines. The City shall strive to improve the transit service to and from all neighborhoods and commercial districts in San Ramon. **Policy 5.6-I-5:** Encourage future transit uses within the I-680 corridor right-of-way and within the City of San Ramon. **Policy 5.6-I-10:** Work with transit providers to situate amenity rich transit stops and shelters at convenient and safe locations. **Policy 5.6-I-11:** Promote increased transit ridership through the use of Transportation Management Associations and other employer-based transit programs, equip buses with three slot bike racks, and make transit information readily accessible in a smart phone friendly format. **Policy 5.6-I-15:** Work with local transit providers to increase and expand weekend transit service and late night Owl service from regional rail and transit hubs.

Strategy	Consistency
	Policy 5.6-I-16: Explore opportunities for the location or relocation of a transit center and/or multiple Mobility Hubs within Bishop Ranch Business Park to better geographically balance the public transit needs for the City.
Strategy LU-4. Increase pedestrian orientation in new development and redevelopment areas. **Strategy T-2.** Provide pedestrian connections in new and existing development to improve pedestrian mobility and accessibility. **Strategy T-3.** Provide a safe and well-connected system of bicycle paths, lanes, and trails to increase bicycle use. **Strategy T-4.** Use traffic calming measures to improve traffic flow, pedestrian orientation, and bicycle use. **Strategy T-7.** Require projects to provide facilities that make travel by bicycle and transit more convenient.	**Consistent**: Proposed policies in the 2040 General Plan would support an efficient and safe bicycle and pedestrian system that would improve the connectivity and accessibility throughout San Ramon. Proposed Goal 5.7-G-1 from the Traffic and Circulation Element is focused on prioritizing bicycling and walking as alternative to driving, consistent with Complete Streets concepts. Proposed policies from the Traffic and Circulation Element listed below would encourage bicycle and pedestrian facilities: **Policy 3.4-I-7:** Improve and expand the bicycle route network in San Ramon. **Policy 3.6-I-4:** As part of the development review process, support the accommodation of public transit, bicycle, and pedestrian access for new development. **Policy 4.8-I-5:** Encourage the linkage and integration of new development with existing neighborhoods by means of Complete Streets networks, open space areas, parks, pathways, associated rights-of-way, and/or easements as a means of enhancing pedestrian and bicycle connections. **Policy 5.6-I-7:** Encourage new development to include a mix of uses and Complete Streets concepts that will allow people to walk and bike between destinations and reduce the amount of automobile vehicle-miles-traveled. **Policy 5.7-I-1:** Establish a network of on- and off-street bicycle routes to encourage their use for commute, recreational, and other trips. Improve and expand bicycle routes for commuters in San Ramon and between San Ramon and neighboring cities. **Policy 5.7-I-2:** Develop bicycle routes that provide access to regional employment centers, shopping centers, public facilities, transit centers, schools, and parks. **Policy 5.7-I-5:** Require bicycle parking, storage and other support facilities as part of new office, retail, housing, and public facilities developments. **Policy 5.7-I-6:** Continue to promote and implement through the development review process, continuous circulation facilities within commercial districts and residential neighborhoods to enhance connectivity and promote pedestrian and bicycle modes of transportation consistent with Complete Streets concepts. **Policy 5.7-I-9:** Implement roadway improvement projects to minimize both temporary and permanent reductions in bicycle and pedestrian mobility and/or accessibility. **Policy 5.7-I-10:** Work with neighboring jurisdictions to ensure that continuity in bicycle and pedestrian networks is provided at jurisdictional boundaries. **Policy 5.7-I-13:** Prioritize bicycle network improvements in the core area of San Ramon, including construction of new facilities and actions to remove barriers to cycling as identified in the San Ramon Bicycle Master Plan, in order to support development in the City's Priority Development Areas (PDAs).

Strategy	Consistency
	Policy 12.5-I-2: Support and encourage projects proposing infill, and mixed-use development that create walkable and bicycle friendly neighborhoods and communities that increase access to transit. **Policy 12.7-I-5:** Construct and promote infrastructure and facilities that support and encourages the use of low-emission transportation and alternative modes of travel, including safe and comprehensive bicycle and pedestrian system that connects all parts of the city and development standards that require installation of alternative fuel infrastructure, such as electric vehicle chargers and hydrogen fueling stations.
Strategy T-8. Encourage the use of parking facility designs and parking management to reduce vehicle trips.	**Consistent**: The 2040 General Plan proposes Land Use Element and Traffic and Circulation Element policies that encourage the use of parking management to reduce vehicle trips. The following policies that support this goal and are relevant to Strategy T-8 are included below: **Policy 4.6-I-13:** Consider shared parking or other alternative parking proposals for residential development based on project-specific parking studies that analyze project need in light of the Zoning Ordinance alternative parking provisions. **Policy 5.6-I-14:** Consider strategies such as shared parking, parking management plans (including valet parking), transit connected satellite parking and/or the construction of public parking facilities in the City Center or other commercial areas to serve projected parking demand, while carefully balancing the need for adequate parking against the desire to minimize traffic growth and create a pedestrian/bicycle friendly environment using Complete Streets design concepts. **Policy 5.6-I-17:** Encourage "Park Once" concepts as a vehicle-miles-traveled reduction strategy for mixed-use, commercial, and public facilities through the integration of common design features and shared parking concepts including but not limited to Parking Benefit Districts. **Policy 5.6-I-18:** Encourage shared parking facilities and parking reductions for compatible land uses to minimize excessive parking to reduce inefficient use of land, unnecessary pavement and stormwater runoff, and encourage alternative transportation and reductions in vehicle-miles-traveled.
Strategy E-1. Increase the use of energy conservation features, renewable sources of energy, and low-emission equipment in new and existing development projects within the City.	**Consistent**: Goals and policies proposed in the 2040 General Plan that would increase the use of energy conservation features, renewable energy sources, and low-emissions equipment in new and existing development include the following Housing Element and Air Quality and Greenhouse Gas Element policies: **Policy IP 11.5.4-3:** Allow minor variations in building setbacks and/or solar orientation during Plan Review to increase energy efficiency of new housing units. **Policy IP 11.5.4-4:** Enforce the State's energy conservation standards for new residential construction and renovations to existing structures. **Policy 9.6-I-5:** Utilize drought-tolerant green infrastructure projects including street trees and landscaped areas and encourage installation of green roof systems as part of cooling strategies in public and private spaces to help reduce the heat island effect and energy demand during extreme heat events.

Strategy	Consistency
	Policy 12.8-I-3: Work with developers during the design review phase to incorporate features to reduce the heat island effect and energy usage by shading buildings, homes, streets, and pedestrian walkways, such as increasing tree and vegetation cover, installing lighter colored building and roofing materials, and using cool pavements. **Policy 12.8-I-2:** Encourage resident and business participation in Marin Clean Energy (MCE), as a regional not-for-profit renewable electricity provider **Policy 12.8-I-6:** Encourage the use of recycled materials for construction and the efforts of the building industry, water and utility districts, and BAAQMD to promote enhanced energy conservation and sustainable building standards for new construction. **Policy 12.8-I-7:** Work with local conservation organizations, local contractors and developers, and the building industry to revise or develop design standards that achieve energy efficiency, weatherization, and carbon neutral buildings relating to solar orientation, using remote sensors that adjust heating, cooling and lighting, cooling building materials, landscaping, use of cool paving surfaces, parking lot shading and other measures oriented towards reducing energy demand in the built environment.
Strategy E-2. Reduce energy use from the transport and treatment of water.	**Consistent**: Goals and policies proposed in the 2040 General Plan would support the City's efforts to conserve water. Goal 8.6-G-1 in the Open Space and Conservation Element is focused on implementing water quality and water conservation programs and measures. The following 2040 General Plan Safety Element, Open Space and Conservation Element, and Air Quality and Greenhouse Gas Element policies would support water conservation in the City: **Policy 9.6-I-3.** Provide educational materials (e.g., websites, social media) and programs to support water conservation efforts that take into account extended drought conditions. **Policy 9.6-I-6.** Prioritize regional solutions with public and private partners, including EBMUD and DSRSD, to diversify the City's water supply through utilizing alternative sources, including recycled water. **Policy 8.6-I-1.** Require new development projects to implement indoor water conservation and demand management measures consistent with building code standards and Climate Action Plan policies. **Policy 8.6-I-2.** Require new development projects to implement outdoor water conservation and demand management measures. **Policy 8.6-I-4.** Require new development to meet the State Model Water Efficient Landscape Ordinance (MWELO). **Policy 8.6-I-5.** Collaborate with DERWA (Dublin San Ramon Services District and East Bay Municipal Utilities District Recycled Water Authorities) to expand the recycled water distribution system in an efficient and timely manner. **Policy 12.4-I-6.** Educate residents on the linkage between land use , transportation, and their impacts on water, energy use, and air pollution. Efforts should include educational materials through variety of effective and engaging platforms and venues. **Policy 12-8-I-5.** Encourage responsible development standards that, where reasonably available, use reclaimed water and non-potable water sources for particulate matter control, including landscaping and construction activities such as fugitive dust control. The development standards shall require new development areas that

Strategy	Consistency
	will be foreseeably served with recycled water to be plumbed with a "purple pipe" system to facilitate the future use of recycled water for landscape irrigation.
Strategy E-3. Improve the City's recycling and source reduction programs to make continues progress in minimizing waste.	**Consistent.** Proposed 2040 General Plan Goal 7.5-G-1 in the Public Facilities and Utilities Element and 2040 General Plan Goal 12.8-G-1 in the Air Quality and Greenhouse Gas Element include specific policies to reduce the generation of solid waste and improve recycling capabilities. Policies include: **Policy 7.5-I-2.** Provide and promote opportunities to reduce waste in all sectors of San Ramon, including residential, commercial, non-profit, government, and educational sectors. **Policy 7.5-I-3.** Develop consumer friendly, convenient, affordable options for community-serving recycling services. **Policy 7.5-I-5.** Comply with State requirements for proper handling and storage of solid waste, recyclables, and hazardous materials, diversion of solid waste from landfills, and provision of programs to make these activities feasible. **Policy 7.5-I-8.** Require solid waste diversion (e.g. waste prevention, reuse, recycling, and composting). **Policy 12.8-I-6.** Encourage the use of recycled materials for construction and the efforts of the building industry, water and utility districts, and BAAQMD to promote enhanced energy conservation and sustainable building standards for new construction. **Policy 12.8-I-8.** Encourage use of materials developed with recycled materials as well as recycling and composting in order to reduce materials being sent to landfills. **Policy 12.8-I-9.** Provide recycling programs to directly accept or connect construction companies with those who accept construction and demolition debris, and provide resources on where recycled materials can be procured for local use.

Note: Only strategies that are applicable to the proposed plan are identified.

OVERALL

Implementation of Mitigation Measure GHG-1 would provide San Ramon with State- and BAAQMD-compliant GHG emissions targets as well as local CAP and CEQA GHG emissions significance thresholds that, all together, would 1) establish a 2020 and 2045 communitywide GHG reduction target; 2) provide an outline of how San Ramon will meet the State targets of 40 percent reduction in GHG emissions below 1990 levels by 2030 and carbon neutrality by 2045, and 3) comply with regional BAAQMD CEQA GHG Thresholds. Therefore, 2040 General Plan impacts related to generation of GHG emissions and consistency with GHG reduction plans and regulations would be less than significant with mitigation.

Mitigation Measures

MITIGATION MEASURE GHG-1: ADOPT AND IMPLEMENT OF A SAN RAMON QUALIFIED CLIMATE ACTION PLAN AND SAN RAMON CEQA GHG EMISSIONS THRESHOLDS

The City shall adopt an updated, qualified San Ramon Climate Action Plan (CAP) by the end of 2024 and include targets that reflect those set by California SB 32 to reduce GHG emissions by 40 percent below the 1990 levels by 2030 and California AB 1279 to achieve carbon neutrality by 2045. The updated, qualified San Ramon CAP shall be implemented and tracked/monitored by the City in accordance with the CAP-established timeline and details.

The City shall also adopt San Ramon CEQA GHG Emissions Thresholds of Significance that are consistent with an updated, qualified San Ramon Climate Action Plan by the end of 2024 for use in future CEQA GHG emissions analyses through 2030 and consistent with SB 32. In addition, upon completion of future climate action plan updates and as necessary, the City shall update the CEQA GHG emissions thresholds of significance to be consistent with each climate action plan update.

Level of Significance

Less than significant with mitigation

Energy Consumption

Significance Criterion c:	Would the proposed plan result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact GHG-2 THE 2040 GENERAL PLAN WOULD IMPLEMENT A LAND-USE STRATEGY AND POLICIES THAT WOULD PROMOTE GREATER OVERALL ENERGY EFFICIENCY. WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY WOULD NOT OCCUR. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Development facilitated by the 2040 General Plan would involve the use of energy during construction. Energy use during construction would be primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery, and generators for lighting. Temporary grid power may also be provided to construction trailers or electric construction equipment. Development facilitated by the 2040 General Plan would utilize construction contractors that comply with applicable CARB regulations such as accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment, and restricted idling of heavy-duty diesel motor vehicles. Construction contractors are required to comply with the provisions of CCR Title 13, sections 2449 and 2485, prohibiting diesel-fueled commercial and off-road vehicles from idling for more than five minutes, minimizing unnecessary fuel consumption. Construction equipment would be subject to the US EPA Construction Equipment Fuel Efficiency Standard, which would minimize inefficient fuel consumption. These construction equipment standards (i.e., Tier 4 efficiency requirements) are contained in 40 Code of Federal Regulations Parts 1039, 1065, and 1068. Electrical power would be consumed during demolition and construction activities, and the demand, to the extent required, would be supplied from existing electrical infrastructure in the area.

Overall, demolition and construction activities would not have any adverse impact on available electricity supplies or infrastructure. Demolition and construction activities would utilize fuel-efficient equipment consistent with State and federal regulations and would comply with state measures to reduce the inefficient, wasteful, or unnecessary consumption of energy. Per applicable regulatory requirements of CALGreen, development facilitated by the 2040 General Plan would comply with construction waste management practices to divert construction and demolition debris from landfills. These practices would result in efficient use of energy by construction facilitated by the 2040 General Plan.

Furthermore, in the interest of cost efficiency, construction contractors would not utilize fuel in a manner that is wasteful or unnecessary. The 2040 General Plan is a response to economic demand for more housing and commercial, neighborhood business, and mixed-use land uses that, if not fulfilled by the proposed plan, would likely result in new construction elsewhere, with associated increases in commuter VMT. The energy used to construct development facilitated by the 2040 General Plan is necessary, because the 2040 General Plan is intended to meet these demands. Therefore, demolition and construction activities associated with the 2040 General Plan would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and construction energy impacts would be less than significant.

Operation

Development facilitated by the 2040 General Plan would involve the use of energy during operation. Daily operation of the regional transportation system uses energy in the form of fuel consumed by propulsion of passenger vehicles, including automobiles, vans and trucks, and transit vehicles, including buses and trains. In addition, longer-term operation of development facilitated by the 2040 General Plan would require permanent grid connections for electricity and natural gas service to power internal and exterior building lighting, and heating and cooling systems.

TRANSPORTATION-RELATED ENERGY USE

Increases in motor vehicle trips are primarily a combined function of population and employment growth. The 2040 General Plan emphasizes reducing VMT on area roadways through emphasizing greater residential density, proximity of residents to commercial uses, and the support of alternative methods of transportation. The 2040 General Plan policies that support a VMT reduction, and thus a reduction in energy usage from transportation fuel, include Policies 4.6-I-29, IP 11.5.1-26, IP 11.5.4-2, 5.3-I-5, 5.6-I-1, 5.6-I-2, 5.6-I-3, 5.6-I-5, 5.6-I-7, 5.6-I-8), 5.6-I-9, 5.6-I-11, 5.6-I-13, 5.6-I-15, 5.6-I-17, 5.6-I-18, 5.7-I-1, 5.7-I-2, 5.7-I-3, 5.7-I-5, 5.7-I-6, 5.7-I-8, 5.7-I-9, 5.7-I-10, 5.7-I-11, 5.7-I-13, 12.5-I-2, 12.7-I-4, 12.7-I-5, 3.3-I-6, 3.4-I-1, 3.4-I-2, 3.4-I-3, 3.4-I-4, 3.4-I-7, 3.6-I-4, 2.3-I-6, 2.3-I-13, and 2.3-I-18 listed with further detail under Impact GHG-1.

Table 3.6-6 shows existing (2022) daily VMT, estimated fuel consumption, and fuel consumption per service population in San Ramon and proposed (2040) conditions with implementation of the 2040 General Plan. As shown therein, daily fuel consumption per service population would be reduced by approximately 5.5 percent under the 2040 General Plan.

Table 3.6-6 Direct Transportation Energy Use in San Ramon

Plan	Year	Service Population	Daily VMT	Daily Fuel Consumption (gallons)	Daily Fuel Consumption Per Service Population (gallons)
2040 General Plan	2022	135,036	4,491,900	219,959	1.63
	2040	166,147	5,313,500	265,138	1.54

Notes: CalEEMod default values for fleet mix and average distance of travel were used for the calculations.

Source: See Appendix C for energy calculations.

In addition to the above policies and implementation programs, the 2040 General Plan would encourage infill and transit- and pedestrian- oriented development to reduce overall energy consumption and result in greater energy efficiency throughout the City. For example, the 2040 General Plan contains land-use strategies to encourage higher-density and mixed-use development near transit and along commercial corridors. Mixed-use, transit-oriented, and higher-density development improve energy efficiency as it places City residents closer to places of employment, businesses those residents patronize, and public transit facilities. By placing services and amenities close to where people live and work, the land use scenario envisioned by the 2040 General Plan would minimize the need to drive and reduce per capita energy consumption.

BUILDING-RELATED ENERGY USE

Operation of the development facilitated by the 2040 General Plan would consume natural gas and electricity for building heating and power, lighting, and water conveyance, among other operational requirements. The 2040 General Plan contains goals, policies, and implementation programs that would help minimize the occurrence of inefficient, wasteful, and unnecessary energy consumption during operation of building development facilitated by the General Plan. The following 2040 General Plan Housing Element, Air Quality and Greenhouse Gas Element, and Public Facilities and Utilities Element guiding policies and implementing policies would result in reduced building-related energy consumption.

Housing Element

Guiding Policy GP 11.5.4-1: Promote climate change goals through energy conserving practices in the location, construction, renovation, and maintenance of San Ramon's housing units.

Policy IP 11.5.4-3 Allow minor variations in building setbacks and/or solar orientation during Plan Review to increase energy efficiency of new housing units.

Policy IP 11.5.4-4 Enforce the State's energy conservation standards for new residential construction and renovations to existing structures.

Policy IP 11.5.4-5 Encourage innovative designs to maximize passive energy efficiencies, while retaining compatibility with surrounding neighborhoods.

Air Quality and Greenhouse Gas Element

Guiding Policy 12.8-G-1: Minimize emissions and potential climate change impacts related to energy consumption through government operations and the built environment.

Policy 12.8-I-1 Work with developers and homeowners to utilize high efficiency all-electric appliances and equipment in new and existing development projects within the city through implementation of on-going State building code standards.

Policy 12.8-I-2 Encourage resident and business participation in Marin Clean Energy (MCE), as a regional not-for-profit renewable electricity provider.

Policy 12.8-I-3 Work with developers during the design review phase to incorporate features to reduce the heat island effect and energy usage by shading buildings, homes, streets, and pedestrian walkways, such as increasing tree and vegetation cover, installing lighter colored building and roofing materials, and using cool pavements.

Policy 12.8-I-4 Sustain on-going efforts with utility providers, developers, and local water agencies to promote and encourage voluntary rebate programs that utilize efficient building designs and energy saving equipment in new and existing development projects within the city.

Policy 12.8-I-6 Encourage the use of recycled materials for construction and the efforts of the building industry, water and utility districts, and BAAQMD to promote enhanced energy conservation and sustainable building standards for new construction.

Policy 12.8-I-7 Work with local conservation organizations, local contractors and developers, and the building industry to revise or develop design standards that achieve energy efficiency, weatherization, and carbon neutral buildings relating to solar orientation, using remote sensors that adjust heating, cooling and lighting, cooling building materials, landscaping, use of cool paving surfaces, parking lot shading and other measures oriented towards reducing energy demand in the built environment.

Public Facilities and Utilities Element

Guiding Policy 7.4-G-1: Ensure the provision of adequate utility systems and communication for existing and future residents and the business community.

Policy 7.4-I-1 Coordinate with Pacific Gas and Electric Company (PG&E) and Marin Clean Energy (MCE) in their efforts to monitor future utility expansion to ensure that facilities are designed and planned with minimal impact on existing and future residents.

The 2040 General Plan would reduce energy consumption by increasing energy efficiency through building setbacks and/or solar orientation, enforcing the State's energy conservation standards for new construction, maximizing energy efficiencies with innovative designs, installing high efficiency all-electric appliances and equipment in new and existing development, encouraging participation in MCE, reducing energy usage by providing shading and trees, and developing design standards that achieve energy efficiency. By implementing these 2040 General Plan goals and policies, the operation of buildings associated with buildout under the 2040 General Plan would minimize per capita and overall energy consumption.

OVERALL

Implementation of the 2040 General Plan guiding policies and policies listed above, as well as other policies and implementation programs contained in the 2040 General Plan that would result in indirect energy conservation, such as the promotion of alternative transportation, water conservation, and waste reduction, would promote greater transportation and building energy

efficiency in municipal and community operations and development. Furthermore, the 2040 General Plan contains a land-use strategy that actively promotes infill, mixed-use, and transit- and pedestrian-oriented development that would result in greater transportation energy efficiency overall for San Ramon residents, businesses, and municipal operations. Therefore, operation of the 2040 General Plan would not result in potentially significant environmental effects from wasteful, inefficient, or unnecessary consumption of energy, and operational energy impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Energy Efficiency or Renewable Energy Standards Consistency

Significance Criterion d:	Would the proposed plan conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Impact GHG-3 THE 2040 GENERAL PLAN WOULD BE CONSISTENT WITH APPLICABLE ENERGY EFFICIENCY GOALS AND REGULATIONS INCLUDED IN RELEVANT PROVISIONS OF CALGREEN (TITLE 24, PART 11). HOWEVER, SAN RAMON HAS NOT ADOPTED THE CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS (TITLE 24, PART 6). DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD NOT BE CONSISTENT WITH STATE ENERGY EFFICIENCY PLANS UNTIL TITLE 24, PART 6 IS ADOPTED BY SAN RAMON. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Construction

Policy consistency is limited to operational energy use discussion. No 2040 General Plan construction impact related to consistency with an applicable energy or energy efficiency plan would occur.

Operation

Relevant plans and policies that aim to increase energy efficiency and the production of renewable energy include SB 100, the 2022 California Green Building Standards Code (CALGreen or Title 24 Part 11), and the 2022 California Building Energy Efficiency Standards (Title 24 Part 6). SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the State's Renewables Portfolio Standard Program and requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045. CALGreen (Title 24 Part 11) institutes mandatory minimum environmental performance standards for all ground-up new non-residential and residential structures and major renovations.[35] In addition, the California Building Energy Efficiency Standards (Title 24 Part 6) establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy demand. CCR Title 24 (Parts 6 and 11) is updated periodically to incorporate and consider new energy-efficiency technologies and methodologies as they become available. New structures and major renovations must demonstrate their compliance with the

[35] Major renovations are defined as changes to the building envelop or changing equipment, including different components and entire systems.

current Building Energy Efficiency Standards through submission and approval of a Title 24 Compliance Report to the local building permit review authority and the CEC.

CONSISTENCY WITH STATE RENEWABLE ENERGY PLANS

San Ramon is part of the MCE community choice aggregate, which provides electricity primarily from clean, renewable sources. San Ramon would continue to reduce its use of nonrenewable energy resources as the electricity generated by renewable resources provided by MCE continues to increase to comply with SB 100 requirements for electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045. The 2040 General Plan includes policies to reduce energy use and increase production of renewable energy, as discussed further below and would, therefore, align with the overall intent of SB 100 and be consistent with this State renewable energy plan.

CONSISTENCY WITH STATE ENERGY EFFICIENCY PLANS

The City of San Ramon has adopted State energy conservation plans, including CALGreen (Title 24 Part 11), pursuant to San Ramon Municipal Code Title 14.[36] Additionally, strategy E-1 from the San Ramon CAP calls for an increase in the use of energy conservation features in new and existing development projects, such as obtaining energy from renewable energy sources and installing low-emission equipment. Therefore, operations associated with infrastructure projects stemming from the 2040 General Plan would be designed to comply with the energy source standards of the CALGreen. Future projects would be required to demonstrate compliance with the CALGreen Standards by implementing sustainability and energy efficiency measures such as high-efficiency lighting and HVAC systems, low-flow water fixtures, dual-paned windows, and water efficient landscaping and irrigation systems. During plan check, the City building department will ensure that new project plans include all required Title 24 energy-efficiency standards.

OVERALL

Proposed 2040 General Plan policies seek to decrease non-renewable (i.e., natural gas) consumption and overall energy consumption in new and existing buildings by installing high efficiency all-electric appliances in new and existing development, reducing energy usage and maximizing energy efficiencies through building design, and enforcing the State's energy conservation standards. These actions are consistent with the goals and policies established by SB 100 and CALGreen. During plan check, the City building department will ensure that new project plans include all required Title 24 energy-efficiency standards.. Therefore, 2040 General Plan impacts related to consistency with energy efficiency or renewable energy standards are less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

[36] San Ramon, City of. 2023. Can Ramon Municipal Code Chapter 8, C1-161. https://online.encodeplus.com/regs/sanramon-ca/doc-viewer.aspx?secid=2875&keywords=california%27s%2Ccalifornia%2Cbuild%2Cbuild%27s%2Cbuilding%27s%2Cbuildings%2Cbuildings%27%2Cbuilds%2Cbuilds%27%2Cbuilt%2Cbuilding%2Cstandard%2Cstandard%27s%2Cstandards%27%2Cstandards#secid-2875 (accessed June 2023).

3.6.5 Cumulative Impacts

GHG emissions and global climate change represent cumulative impacts. GHG emissions cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature; instead, the GHG emissions from past, present, and future projects and activities have contributed, currently are contributing, and would contribute to global climate change and its associated environmental impacts. The geographic scope of the cumulative energy analysis is the MCE and PG&E service areas. The cumulative analysis considers the nearby past, present, and reasonably foreseeable future plans and projects listed in Table 3-1 (refer to Chapter 3.0, *Environmental Impact Analysis*) located in San Ramon, Danville, and unincorporated Contra Costa County in addition to the proposed plan.

GHG Emissions

Cumulative development would generate GHG emissions associated with vehicle trips, power and water use, and other sources. The analysis of GHG emissions is cumulative in nature, as emissions affect the accumulation of GHGs in Earth's atmosphere. Projects that fall below thresholds and meet established GHG reduction targets are considered to have a less than significant impact, both individually and cumulatively. Implementation of Mitigation Measure GHG-1 would require the City to adopt and implement an updated, qualified climate action plan and CEQA GHG emissions thresholds, which in turn would reduce GHG emissions consistent with State GHG reduction targets set by SB 32 and AB 1279As such, impacts from the 2040 General Plan's GHG emissions would be less than significant with mitigation, and the proposed plan would not represent a cumulatively considerable impact related to GHG emissions. Therefore, the cumulative impact related to GHG emissions would be less than significant with mitigation.

Energy

Cumulative development would increase demand for energy resources. However, new iterations of the California Building Energy Efficiency Standards and CALGreen would require increasingly more energy efficient appliances and building materials that reduce energy consumption in new development. In addition, vehicle fuel efficiency is anticipated to continue improving through implementation of the existing Pavley Bill regulations under AB 1493. Nevertheless, the combined increase in energy consumption from cumulative projects would potentially result in a cumulative impact related to the wasteful, inefficient, and unnecessary consumption of energy resources. Development facilitated by the 2040 General Plan would be constructed in accordance with State building code standards, such as CALGreen. Policies would emphasize alternative means of transportation, such as bicycles and walking, and would provide development in close proximity to transit stations. Additionally, infill development may lower VMT due to the proximity to offices and commercial uses. Plans and projects throughout the State are required to adhere to applicable renewable energy and energy efficiency laws, programs, and policies such as California's RPS, AB 1493, and Title 24 standards. As such, impacts from the 2040 General Plan's energy usage would be less than significant, and the proposed plan would not represent a cumulatively considerable impact related to energy. Therefore, the cumulative impact related to energy would be less than significant.

Overall Level of Cumulative Significance

Less than significant without mitigation

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3.7 Hazards, Hazardous Materials, and Wildfire

3.7.1 Introduction

This section describes the existing hazards, hazardous materials, and wildfire conditions in the General Plan area as well as the relevant regulatory framework. This section also evaluates the possible impacts related to hazards, hazardous materials, and wildfire that could result from implementation of the proposed plan. Information in this section is based on information available on the California Department of Toxic Substances (DTSC), the State Water Resources Control Board (SWRCB), the California Environmental Protection Agency (CalEPA), California Department of Forestry and Fire Protection, and the City of San Ramon websites.

3.7.2 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.

Hazardous Materials

Hazardous materials, as defined by the California Code of Regulations, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when handled, disposed, or otherwise managed improperly. Hazardous materials are grouped into the following four categories, based on their properties:

- Toxic—causes human health effects
- Ignitable—has the ability to burn
- Corrosive—causes severe burns or damage to materials
- Reactive—causes explosions or generates toxic gases

A hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. If improperly handled, 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 contain technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

HAZARDOUS BUILDING MATERIALS

Many older buildings contain building materials that consist of hazardous materials. These materials include lead-based paint, asbestos-containing material, and polychlorinated biphenyls (PCBs).

Prior to the United States Environmental Protection Agency (USEPA) ban in 1978, lead-based paint 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 USEPA in the 1970s due to harmful health effects. 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 USEPA 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, that may cause harm to human health. Hazardous substances are classified on the basis of their potential health effects, whether acute (immediate) or chronic (long-term). Dangerous goods are classified on the basis of 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 handled 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, including 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 DTSC EnviroStor database.[1]
- The list of leaking underground storage tank (LUST) sites by county and fiscal year from the SWRCB GeoTracker database.[2]
- The list of solid waste disposal sites identified by the SWRCB 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 SWRCB.[4]
- The list of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, as identified by DTSC.[5]

Presence of Hazardous Materials

General Plan Area

According to databases of hazardous material sites maintained by California DTSC EnviroStor and SWRCB GeoTracker, the San Ramon Planning Area (i.e., the General Plan area) has the following types of hazardous sites that are open, active, or need further investigation:

- underground storage tank (UST) cleanup program site,
- cleanup program sites[6],
- voluntary cleanup site, or
- evaluation.[7,8]

The specific list of hazardous material sites within the General Plan area is shown in Table 3.7-1. Of these sites, the two remaining open sites are shown on Figure 3.7-1. In addition, Interstate 680, which traverses through San Ramon, is designated by the National Hazardous Materials Route Registry as a Class A (All Non- radioactive Hazardous Materials) route as well as a Class B (Class 1 Explosives) route.[9]

[1] California DTSC. "Cortese" list of DTSC EnviroStor database list of Hazardous Waste and Substances sites. DTSC Hazardous Waste and Substances Site List—Site Cleanup (Cortese List). Available: http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm. (accessed April 2023)
[2] SWRCB. "Cortese" List of Leaking Underground Storage Tank Sites by County (Contra Costa County). Available: https://geotracker.waterboards.ca.gov/sites_by_county. (accessed April 2023)
[3] CalEPA. "Cortese" list of solid waste disposal sites identified with waste constituents above hazardous waste levels outside the waste management unit. Available: http://www.calepa.ca.gov/files/2016/10/SiteCleanup-CorteseList-CurrentList.pdf. (accessed April 2023)
[4] CalEPA. "Cortese" list of State Water Board sites with active Cease and Desist Orders or Cleanup Abatement Orders. Available:http://www.calepa.ca.gov/files/2016/10/SiteCleanup-CorteseList-CDOCAOList.xlsx. (accessed April 2023)
[5] CalEPA. "Cortese" list of sites subject to Corrective Action pursuant to Health and Safety Code 25187.5. Available: https://www.calepa.ca.gov/sitecleanup/corteselist/section-65962-5a/. (accessed April 2023)
[6] May include voluntary cleanup, school cleanup, school investigation, or corrective action sites.
[7] California DTSC. 2023. EnviroStor. Available: https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=San+Ramon%2C+CA (accessed April 2023).
[8] SWRCB. 2023. GeoTracker. Available: https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=san+ramon%2C+CA# (accessed April 2023).
[9] Federal Motor Carrier Safety Administration. 2019. National Hazardous Materials Route Registry – By State. Available: https://www.fmcsa.dot.gov/regulations/hazardous-materials/national-hazardous-materials-route-registry-state (accessed April 2023)

Table 3.7-1 Hazardous Material Sites within General Plan Area

Site Address	Site Name	Status
12141 Alcosta Boulevard	Former Green Valley Shopping Center	Open – Inactive
2850 Crow Canyon Road	Shell Service Station #136049	Open – Site Assessment
2300 Talavera Drive	Bollinger Canyon Elementary School	Inactive – Needs Evaluation
3470 Fostoria Way	Electro Test Inc.	Inactive – Needs Evaluation

Notes:
Active Sites are sites at which site assessment, removal, remedial enforcement, cost recovery, or oversight activities are being planned or conducted under a hazardous materials program
Open Sites are sites at which hazardous materials activities have already been conducted
Inactive Sites are sites where through a Preliminary Endangerment Assessment or other evaluation, DTSC has determined that a removal or remedial action or further extensive investigation is required.

Proximity to Schools

School locations require consideration, because children are particularly sensitive to hazardous materials exposure. San Ramon also includes sensitive land uses such as hotels and motels; group homes, churches; other learning institutions; and libraries.

General Plan Area

The San Ramon Valley Unified School District (SRVUSD) provides elementary, middle, and high school public education to the San Ramon Planning Area (i.e., the General Plan area), the Town of Danville, and the unincorporated communities of Alamo, Diablo, and Blackhawk. SRVUSD operates 14 elementary schools, five middle schools, and two high schools within the General Plan area. [10] As of the 2021-2022 school year, SRVUSD had a total enrollment of 30,068 students.[11]

There are no open hazardous materials sites located within 0.25-mile of a school within the General Plan area as shown on Figure 3.7-2.

[10] San Ramon Valley Unified School District. 2023. High School Boundaries. https://www.srvusd.net/documents/Departments/Facilities/Find-Your-School/High-School-boundary-map-PDF.pdf (accessed March 2023).
[11] California Department of Education. 2021. San Ramon Valley Unified School District 2021-22 Enrollment By Grade. https://dq.cde.ca.gov/dataquest/dqcensus/EnrGrdLevels.aspx?cds=0761804&agglevel=district&year=2021-22 (accessed March 2023).

Figure 3.7-1 Hazardous Material Sites within General Plan Area

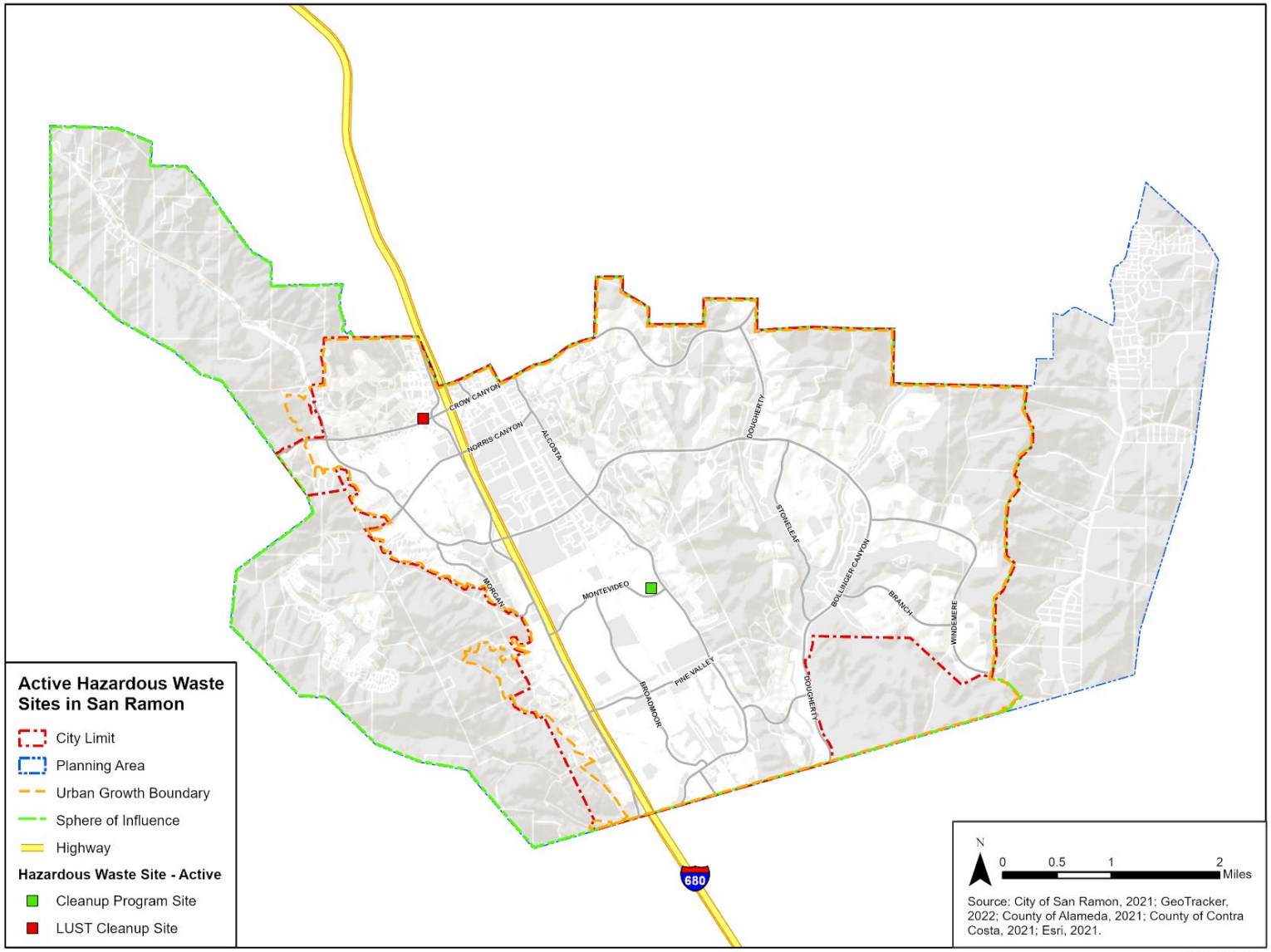
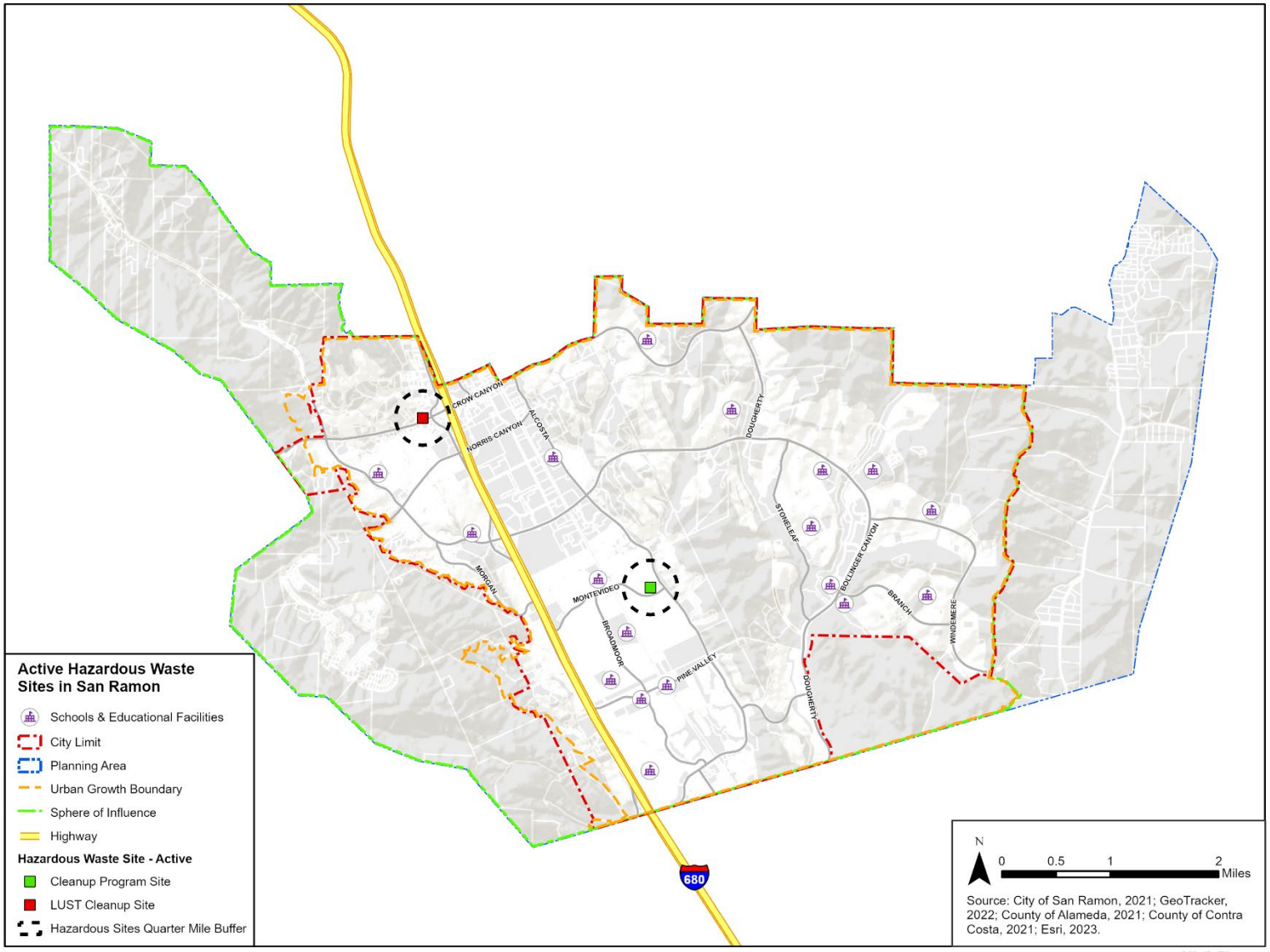


Figure 3.7-2 Hazardous Material Sites within 0.25-mile of a School



Wildfire Hazard Area Designations

Classifications and Zones

In California, responsibility for wildfire prevention and suppression is shared by federal, State, and local agencies. Federal agencies are responsible for federal lands in Federal Responsibility Areas (FRA). The State of California has determined that some non-federal lands in unincorporated areas with watershed value are of Statewide interest and have classified those lands as State Responsibility Areas (SRA), which are managed by CAL FIRE.[12] All incorporated areas and other unincorporated lands are classified as Local Responsibility Areas (LRA).

CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors (Public Resources Code Sections 4201-4204 and California Government Code Sections 51175-89). As described above, the primary factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. CAL FIRE maps fire hazards based on zones, referred to as FHSZs. CAL FIRE maps three zones in SRA: 1) Moderate FHSZs; 2) High FHSZs; and 3) Very High FHSZs (VHFHSZs). Only the VHFHSZs are mapped in LRA. Each of the zones influence how people construct buildings and protect property to reduce risk associated with wildfires.

Contra Costa County

According to the California Department of Forestry and Fire Protection (CAL FIRE) Fire Hazard Severity Zone Map, much of Contra Costa County is located in a Moderate, High, and Very High Fire Hazard Zone due to the mountainous terrain and natural vegetation. In general, the majority of these areas are designated High Fire Hazard Severity Zones with areas of significant elevation change, such as Mount Diablo State Park and Bishop Ranch Regional Preserve. Prevailing winds in the County tend to travel from the west between February and November and travel from the north between the months of November to February.[13]

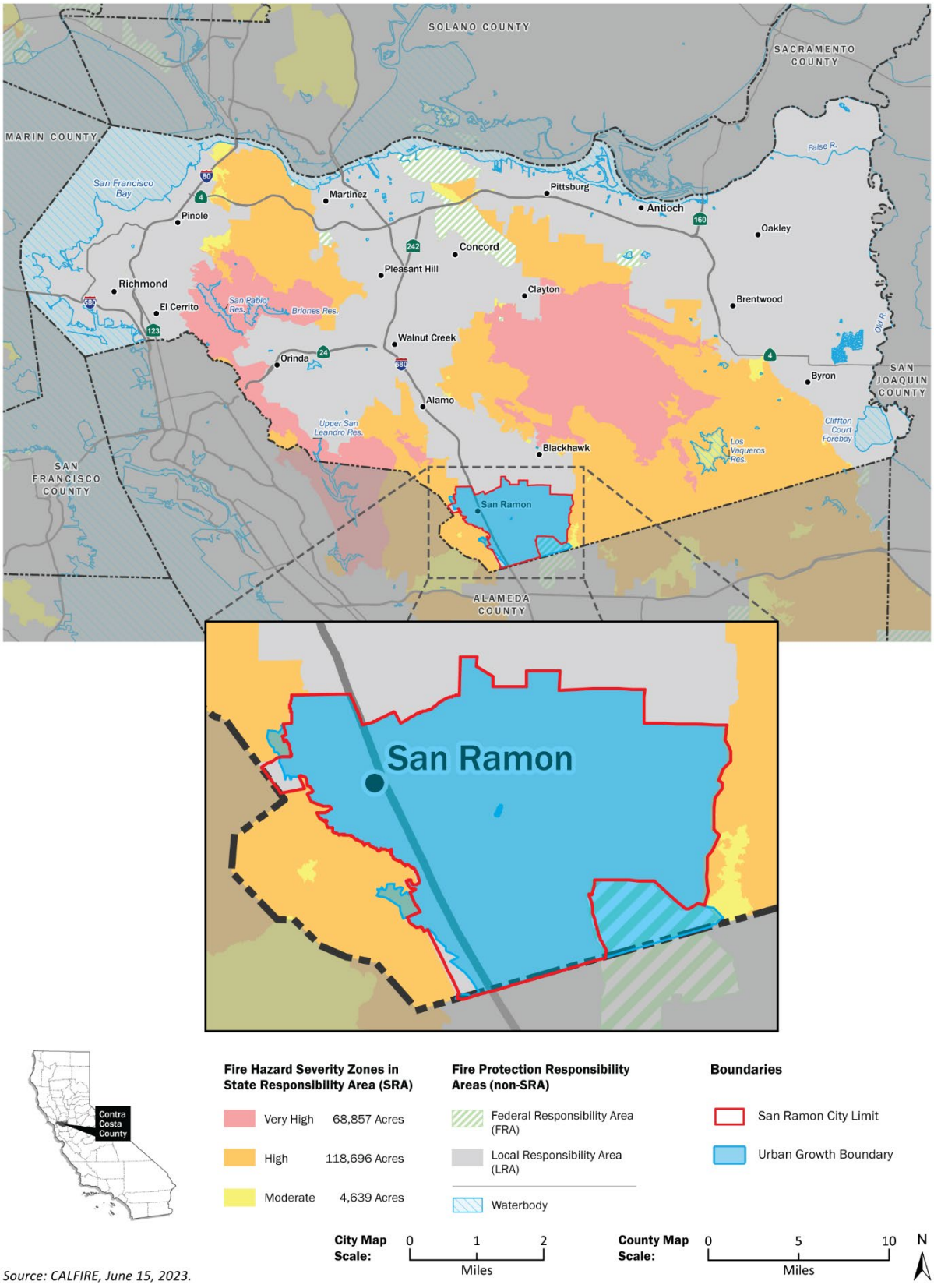
General Plan Area

The San Ramon Planning Area (i.e., General Plan area) proximity to Las Trampas Regional Preserve and Bishop Ranch Regional Open Space Preserve and other open, undeveloped land poses a threat of wildland fires spreading near and into the sphere of influence where the park and open space abuts urban development to the west southwest and in the eastern portion of the General Plan area (shown in Figure 3.7-3). Minor brush fires in the area are common during the fire season but previously have been extinguished before developed areas sustain much damage. The eastern portion of the General Plan area is designated as a Moderate to High Fire Hazard Severity Zones within a State Responsibility Area. The northwestern and western portion of the San Ramon Planning Area (but primarily outside of City Limits) are designated as being High Fire Hazard Severity Zones within a State Responsibility Area.

[12] United States Department of the Interior, US Department of Agriculture, and CAL FIRE. 2018. 2018-2023 California Master Cooperative Wildland Fire Management and Stafford Act Response Agreement. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd576218.pdf (accessed April 2023).

[13] WeatherSpark. 2023. Climate and Average Weather Year Round in San Ramon. https://weatherspark.com/y/1100/Average-Weather-in-San-Ramon-California-United-States-Year-Round (accessed April 2023).

Figure 3.7-3 Wildfire Hazard Severity Zones in and Proximate to General Plan Area



Source: CALFIRE, June 15, 2023.

Wildfire-Conducive Conditions

Because of substantial open space areas and associated vegetation and wildlife habitats throughout the State, California is subject to fire hazards. Grassland or other vegetation in California is easily ignited, 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 and could ignite vegetation where it comes into contact. Wildfire could also spread in areas of fuel lines, which could fail (whether due to earthquake or error) and ignite a fire. Extreme wildfire events are expected to increase in frequency with the effects of increased global temperature, although changes in specific fire-prone areas are difficult to predict with any certainty.[14]

The Governor's Office of Planning and Research (OPR) has recognized that although high-density structure-to-structure loss can occur, structures in areas with low- to intermediate-density housing were most likely to burn, potentially due to intermingling with wildland vegetation or difficulty of firefighter access. In general, increasing density decreases risk of wildfire. The risk of loss of human life, property, natural resources, or economic assets from wildfire is highest at the Wildland-Urban Interface (WUI), areas of urban development located adjacent to or even within wildland areas. Today approximately one-third of houses in California are within the WUI area.[15] It is important to note that there are varying definitions of what constitutes a WUI, and some local or regional agencies consider some areas to be WUI that are not defined as Wildland Interface or Intermix zones under the Wildland-Urban Interface Building Standards in Title 24, Part 2 of the California Code of Regulations (CCR); these standards are discussed under *Regulatory Setting* below.

In addition to stripping the land of vegetation and destroying forest resources, large, intense fires can harm the soil, waterways, and the land itself. Soil exposed to intense heat may lose its capability to absorb moisture and support life. Exposed soils erode quickly and enhance siltation of rivers and streams, thereby enhancing flood potential, harming aquatic life, and degrading water quality. Lands stripped of vegetation are also subject to increased debris flow hazards. Slope instability from wildfire scarring of the landscape can result in slope instability in the form of more intensive flooding and landslides. Such post-fire slope soils and altered drainage patterns can result in soil creep on downslope sides of foundations and reduce lateral support.

Vegetation

CONTEXT

Vegetation is fuel to a wildfire, and it changes over time with seasonal growth and die-back. The relationship between vegetation and wildfire is complex, but generally some vegetation is naturally fire resistant, while other vegetation is extremely flammable. Some plant types in California landscapes are fire resistant, while others are fire-dependent for their seed germination cycles.

Wildfire behavior depends on the type of fuels present, such as ladder fuels, surface fuels, and aerial fuels. Surface fuels include grasses, logs, and stumps low to the ground. Ladder fuels, such as tall shrubs, young trees, and the lowest branches of mature trees, provide a path for fire to climb

[14] United States Forest Service (USFS). 2022. Wildland Fire. https://www.fs.usda.gov/ccrc/topics/wildfire (accessed April 2023)
[15] California Governor's Office of Planning and Research (OPR) 2020. Fire Hazard Planning Technical Advisory https://opr.ca.gov/docs/20201109-Draft_Wildfire_TA.pdf (accessed April 2023)

upward into the crowns of trees. Aerial fuels include upper limbs, foliage, and branches not in contact with the ground. Ample spacing in between tree crowns and trimming of lower branches close to the ground is effective at preventing fire from either igniting the crown of a tree or spreading from an ignited tree to adjacent trees; conversely, closely packed trees with low branches are especially susceptible to crown ignition and spread.[16] Weather and climate conditions, including drought cycles, can lead to dry vegetation with low moisture content, increasing its flammability.

Changes in precipitation patterns and increased temperatures associated with climate change will alter the distribution and character of natural vegetation and associated moisture content of plants and soils. An increase in frequency of extreme heat events and drought are also expected. These changes will lead to increased frequency and intensity of large wildfires.

CONTRA COSTA COUNTY

Land uses in Contra Costa County range from rural, agricultural, and open space; to urban and developed. According to the CAL FIRE Fire Hazard Severity Zone Map, much of Contra Costa County is located in a Moderate, High, and Very High Fire Hazard Zone due to the mountainous terrain and natural vegetation. In particular, areas near open space areas such as, Mount Diablo State Park, Briones Regional Park, and Tilden Regional Park, which are dominated by chaparral and grassland vegetation, are located in High and Very High fire hazard zones.

GENERAL PLAN AREA

The San Ramon Planning Area (i.e., the General Plan area) is located in a mostly urbanized, flat area and does not contain any CAL FIRE-designated "Very High" fire hazard zones. However, the eastern portion of the General Plan area is located within a CAL FIRE designated "Moderate" fire hazard zone. The northwesternmost area of the General Plan area is designated as being within a "High" fire hazard zone. The western portion of the General Plan area is also located within the "High" fire hazard zone. All of San Ramon's fire hazard zones are located within the State Responsibility Area.

Slope and Aspect

CONTEXT

According to CAL FIRE, sloping land increases susceptibility to wildfire because fire typically burns faster up steep slopes, and they may hinder firefighting efforts.[17] Following severe wildfires, sloping land is also more susceptible to landslide or flooding from increased runoff during substantial precipitation events. Aspect is the direction that a slope faces, and it determines how much radiated heat the slope will receive from the sun. Slopes facing south to southwest will receive the most solar radiation and are warmer and drier than slopes facing a northerly to northeasterly direction, increasing the potential for wildfire ignition and spread.[18]

CONTRA COSTA COUNTY

Slope instability from wildfire scarring of the landscape can result in slope instability in the form of more intensive flooding and landslides. These post-fire slope soils and altered drainage patterns can result in soil creep on downslope sides of foundations and reduce lateral support. The major post-

[16] CAL FIRE. 2023. Vegetation Management Program. https://www.fire.ca.gov/what-we-do/natural-resource-management/vegetation-management-program (accessed April 2023).
[17] National Park Service. 2017. Wildland Fire Behavior. https://www.nps.gov/articles/wildland-fire-behavior.htm (accessed April 2023)
[18] University of California. 2018. Field Operations Manual. Revised November 2018. https://www.ucop.edu/safety-and-loss-prevention/_files/field-research-safety/wildland-fire-safety.pdf (accessed April 2023).

wildfire hazards in Contra Costa County are unstable hill slopes and altered drainage patterns. Slopes may suffer landslides, slumping, soil slips, and rockslides. The Contra Costa County General Plan has recognized that major slope areas in excess of 26 percent are "not readily developable" and "undevelopable," recognizing the cost and engineering difficulties of grading steep slopes as well as their inherent unsuitability.[19] Figure 10-6 of the Contra Costa County General Plan shows Landslide Hazards in Contra Costa County. The most recent fire in Contra Costa County is the Scenic Fire (2022, off Carquinez Scenic Drive and Canyon Lake Drive, east of the City of Crockett), located approximately 20 miles to the north[20].

GENERAL PLAN AREA

As discussed in Section 3.5, *Geology, Soils, and Mineral Resources,* the San Ramon Planning Area (i.e., the General Plan area) does contain active faults that could cause geologic uplifting. According to the Landslide Susceptibility Zones figure in the Contra Costa County Hazard Mitigation Plan, the western and eastern portions of San Ramon are located in an area designated as having a "moderate" to "high" risk for landslides. The western and eastern portions of the General Plan area are identified within the ABAG Resilience Program and the California Geological Survey (CGS) as having the potential for landslide hazards.[21,22]

Weather and Atmospheric Conditions

Wind, temperature, and relative humidity are the most influential weather elements in fire behavior and susceptibility.[23] Fire moves faster under hot, dry, and windy conditions. Wind may also blow embers ahead of a fire, causing its spread. Drought conditions lead to extended periods of excessively dry vegetation, increasing the fuel load and ignition potential.

According to data collected by the California Energy Commission, most precipitation is received from October through April, with an average annual rainfall of 26.4 inches.[24] May through September is the driest time of the year and coincides with what has traditionally been considered the fire season in California. However, increasingly persistent drought and climatic changes in California have resulted in drier winters, and fires during the autumn, winter, and spring months are becoming more common.

CONTRA COSTA COUNTY

Prevailing winds in the County tend to travel in a northwest to southwest direction.[25] The average wind speed in the City of San Ramon ranges from 33 to 7 mph and blows east.[26] Natural gas pipelines occur frequently across Contra Costa County, including residential and commercial areas.

[19]Contra Costa County General Plan, page 10-22.
[20] California Department of Forestry and Fire Protection. 2023. Scenic Fire. https://www.fire.ca.gov/incidents/2022/6/23/scenic-fire/ (accessed June 2023)
[21] Association of Bay Area Governments (ABAG). 2021. MTC/ABAG Hazard Viewer Map [map]. https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8 (accessed April 2023)
[22] CGS. 2011. US Landslide Inventory. https://maps.conservation.ca.gov/cgs/DataViewer/ (accessed April 2023)
[23] CAL FIRE. 2022. Fire and Fuels Treatment. https://www.fire.ca.gov/programs/resource-management/resource-protection-improvement/landowner-assistance/forest-stewardship/fire-and-fuels-treatment/ (accessed April 2022).
[24] California Energy Commission. 2022. Cal-Adapt [tool]. https://cal-adapt.org/tools/annual-averages (accessed April 2023).
[25]Bay Area Air Quality Management District (BAAQMD). Air Monitoring Data. https://www.baaqmd.gov/about-air-quality/current-air-quality/air-monitoring-data/?DataViewFormat=yearly&DataView=met&StartDate=2/19/2019&ParameterId=204.#/met?date=2022-04-10&id=221&view=monthly&style=chart&zone=f9c8748a-510a-442c-b703-804bdcd5f1d7 (accessed April 2023)
[26] BAAQMD. 2022 Air Monitoring Data. Available: https://www.baaqmd.gov/about-air-quality/current-air-quality/air-monitoring-data/?DataViewFormat=yearly&DataView=met&StartDate=2/19/2019&ParameterId=204.#/met?date=2022-04-10&id=221&view=monthly&style=chart&zone=f9c8748a-510a-442c-b703-804bdcd5f1d7. (accessed April 2023)

Natural gas poses a lower risk of causing a fire than petroleum products, because it is transported at lower pressures and, when released, rises and dissipates into the atmosphere.[27]

GENERAL PLAN AREA

In general, the average wind speed in Contra Costa County ranges from 14 to 17 miles per hour (mph) and blows southwest.[28] Electric power lines mostly occur in urban areas and along roadways. There are three fuel pipelines that traverse the General Plan area: one beneath I-680, one beneath portions of southern Dougherty Road, southern Old Ranch Road, southern Alcosta Boulevard, and Dougherty Hills Trail, and one beneath the Iron Horse Regional Trail.[29] Electrical lines within the General Plan area typically exist above ground, along streets and roadways.

The closest Bay Area Air Quality Management District (BAAQMD) air data monitoring station is located within San Ramon.

Fuel and Energy Lines

Electric power lines mostly occur in urban areas and along roadways. Electric power, natural gas, and petroleum lines pose a risk of causing fire in the event of failure (whether due to earthquake or error). Natural gas poses a lower risk of causing a fire than petroleum products, because it is transported at lower pressures and, when released, rises and dissipates into the atmosphere.[30]

CONTRA COSTA COUNTY

Natural gas and petroleum pipelines occur across Contra Costa County, including residential and commercial areas. Specifically, the Kinder Morgan line runs along the Iron Horse Trail Right of Way.

GENERAL PLAN AREA

There are natural gas pipelines that traverse the General Plan area underneath I-680, and beneath portions of southern Dougherty Road, southern Old Ranch Road, southern Alcosta Boulevard, and Dougherty Hills Trail.[31]

Emergency and Evacuation Routes/Access

Contra Costa County

The Contra Costa County Office of the Sheriff: Emergency Services Division is responsible for planning, outreach, and training or disaster management and emergency preparedness throughout the County.[32] The Contra Costa County General Plan establishes a 5-minute response time standard for responding to fire protection calls for service. Within Contra Costa County, the main routes into

[27] Contra Costa County. Contra Costa County General Plan, Safety Element, page 10-37.
[28] BAAQMD. Air Monitoring Data. Available: http://www.baaqmd.gov/about-air-quality/current-air-quality/air-monitoring-data?DataViewFormat=yearly&DataView=met&StartDate=2/19/2019&ParameterId=204.(accessed November 2022)
[29] National Pipeline Mapping System. 2022. NPMS Public Viewer. Available: https://pvnpms.phmsa.dot.gov/PublicViewer/ (accessed April 2023).
[30] United States Department of Energy. 2022. Alternative Fuels Data Center. Available: https://afdc.energy.gov/vehicles/natural_gas_safety.html (accessed November 2022).
[31] National Pipeline Mapping System. 2022. NPMS Public Viewer. Available: https://pvnpms.phmsa.dot.gov/PublicViewer/ (accessed April 2023).
[32] Contra Costa County Office of the Sheriff. 2022. Available: https://www.cocosheriff.org/bureaus/support-services/emergency-services-support-unit-volunteers (accessed November 2022)

and out of the County that would be most likely used as evacuation routes are Interstate 80 (I-80), I-680, and I-580, as well as State Route 4 (SR-4) and SR-24.

General Plan Area

A combination of the San Ramon Police Department and Contra Costa County Office of the Sheriff are responsible for planning, outreach, and training or disaster management and emergency preparedness for the General Plan area. The main routes into and out of the General Plan area that would be most likely used as evacuation routes are I-680, Crow Canyon Road, San Ramon Valley Boulevard, Dougherty Road, and Alcosta Boulevard.

Airport Safety Zone Proximity

General Plan Area

The nearest airports to the General Plan area are the Livermore Municipal Airport located approximately 12 miles southeast from San Ramon and the Oakland International Airport located approximately 23 miles west from City Center.

3.7.3 Regulatory Framework

Federal Regulations

Resource Conservation and Recovery Act and Comprehensive Environmental Response, Compensation, and Liability Act

The USEPA 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 USEPA 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 National Priorities List 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 (DOT), Office of Hazardous Materials Safety regulates the transportation of hazardous materials on water, rail, 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, placecarding, and shipping documentation. The DOT provides hazardous-materials safety training programs and supervises activities involving hazardous materials. In addition, DOT 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] 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 [33 USC 1251, et seq.]) 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. The objective of the act 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. Responsibility for administering the CWA resides with SWRCB and the nine respective RWQCBs; the San Francisco Bay RWQCB administers the CWA in the San Ramon area.

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 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 nontidal 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 quality certification from the RWQCB to demonstrate that the proposed activity would comply with State water quality standards.

Federal Insecticide, Fungicide, and Rodenticide Act

This Act (7 U.S. Code [USC] 136 et seq.) provides Federal control of pesticide distribution, sale, and use. The USEPA was given authority under the Act to study the consequences of pesticide usage, and to require users (farmers, utility companies, and others) to register when purchasing pesticides. Later amendments to the law required users to take exams for certification as applicators of pesticides. All pesticides used in the United States must be registered (licensed) by the USEPA.

Registration assures that pesticides will be properly labeled and that, if used in accordance with specifications, they will not cause unreasonable harm to the environment.

Lead-Based Paint Elimination Final Rule 24 Code of Federal Regulations

Governed by the U.S. Housing and Urban Development, regulations for LBP are contained in the Lead-Based Paint Elimination Final Rule 24 Code of Federal Regulations (CFR) 33, which requires sellers and lessors to disclose known LBP and LBP hazards to perspective purchasers and lessees. Additionally, all LBP abatement activities must follow California and federal occupational safety and health administrations (California Occupational Safety and Health Administration [CalOSHA] and federal Occupational Safety and Health Administration [OSHA], respectively) and with the State of California Department of Health Services requirements. Only LBP trained and certified abatement personnel can perform abatement activities. All lead LBP removed from structures must be hauled and disposed of by a transportation company licensed to transport this type of material at a landfill or receiving facility licensed to accept the waste.

Federal Disaster Mitigation Act

The Disaster Mitigation Act of 2000 requires a State-level mitigation plan as a condition of disaster assistance and provides funding to communities developing their own mitigation plans through the Pre-Disaster Mitigation Grant Program. There are two different levels of State disaster plans: "Standard" and "Enhanced." States that develop an approved Enhanced State Plan can increase the amount of funding available through the Hazard Mitigation Grant Program. The Act also established new requirements for local mitigation plans.

National Fire Plan

The National Fire Plan was developed in August 2000, following a historic wildfire season. Its intent is to establish plans for active response to severe wildfires and their impacts to communities while ensuring sufficient firefighting capacity. The plan addresses firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability.

State Regulations

California Hazardous Waste Control Law

The California Hazardous Waste Control Law (HWCL) is the primary hazardous waste statute in the State of California, and implements RCRA as a "cradle-to-grave" waste management system in the State of California for handling hazardous wastes in a manner that protects human health and the environment and would reduce potential resulting impacts. The law specifies that generators 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 a number of types of waste and waste management activities that are not covered by federal law.

The hazardous waste management program enforced by DTSC was created by the Hazardous Waste Control Act (California Health and Safety Code Section 25100 et seq.), which is implemented by regulations described in California Code of Regulations (CCR) Title 26. The State program is similar to, but more stringent than, the federal program under RCRA. The regulations list materials that

may be hazardous, and establish criteria for their identification, packaging, and disposal. Environmental health standards for management of hazardous waste are contained in CCR Title 22, Division 4.5. As required by California Government Code Section 65962.5, DTSC maintains a Hazardous Waste and Substances Site List for the State called the Cortese List.

If any soil is excavated from a site containing hazardous materials, it would be considered a hazardous waste if it exceeded specific criteria in Title 22 of the California Code of Regulations. Remediation of hazardous wastes found at a site may be required if excavation of these materials is performed, or if certain other soil disturbing activities would occur. Even if soil or groundwater at a contaminated site does not have the characteristics required to be defined as hazardous waste, remediation of the site may be required by regulatory agencies subject to jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking jurisdiction.

California Health and Safety Code

The California Health and Safety Code (HSC § 25141) 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.

This statutory framework establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management practices for hazardous wastes; establishes permit requirements for hazardous-waste treatment, storage, disposal, and transportation; and identifies hazardous waste that commonly would be disposed of in landfills.

Under both the RCRA and 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 Certified Unified Program Agencies program, including:

- Hazardous Materials Business Plans (HMBPs) (HSC § 25501, *et seq*.);
- State Uniform Fire Code (UFC) requirements (UFC § 80.103, as adopted by the State Fire Marshal pursuant to HSC § 13143.9);
- Underground Storage Tanks (USTs) (HSC § 25280, *et seq*.);
- Aboveground storage tanks (HSC § 25270.5[c]); and
- Hazardous-waste-generator requirements (HSC § 25100, et seq.).

Contra Costa Health Services is the CUPA for Contra Costa County and enforces State statutes and regulations through the Hazardous Materials Unified Program Agency (HMUPA). The HMUPA

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, which interfaces with SWRCB and the San Francisco Bay RWQCB on LUSTs and UST release sites. An HMBP must be submitted 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 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; and

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 (Workplace Safety Regulations)

The California Division of Occupational Safety and Health (CalOSHA) 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.

CalOSHA also enforces hazard communication program regulations, including procedures for identifying and labeling hazardous substances, and requires that safety data sheets (formerly known as material safety data sheets) be available for employee information and training programs. CalOSHA standards are generally more stringent than federal regulations. Construction workers and operational employees within the plan area would be subject to these requirements.

California Code of Regulations, Title 8, Section 1529 authorizes CalOSHA to implement the survey requirements of CFR 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 BAAQMD oversees the removal of regulated asbestos-containing materials (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 lead-based paint. 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 lead-based paint 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 with respect to identifying existing and predictable lead hazards to oversee air monitoring and other protective measures during demolition activities in areas where lead-based paint may be present. Special protective measures and notification of CalOSHA are required for highly hazardous construction tasks related to lead, such as manual demolition, abrasive blasting, welding, cutting, or torch burning of structures, where lead-based paint is present.

California Code of Regulations Title 14 – Fire Safe Roads

The Board of Forestry maintains fire safe road regulations, as part of CCR Title 14. This includes requirements for road width, surface treatments, grade, radius, turnarounds, turnouts, structures, driveways, and gate entrances. These regulations are intended to ensure safe access for emergency wildland fire equipment and civilian evacuation.

California Code of Regulations Title 22 (Environmental Health Standards for the Management of Hazardous Waste)

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 CCR § 66273) provides an alternative set of management standards in lieu of regulation as hazardous wastes for certain common hazardous wastes, as defined in 22 California Code of Regulations 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 DTSC to allow for disposal of treated wood as a nonhazardous waste, to simplify and facilitate the safe and economical 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 nonhazardous waste landfills.

California Code of Regulations Title 24 (California Building Code)

Updated every three years through a rigorous stakeholder process, Title 24 of the California Code of Regulations requires California homes and businesses to meet strong fire and safety measures. Title 24 contains numerous subparts, including Part 1 (Administrative Code), Part 2 (Building Code), Part 3 (Electrical Code), Part 4 (Mechanical Code), Part 5 (Plumbing Code), Part 6 (Energy Code), Part 8 (Historical Building Code), Part 9 (Fire Code), Part 10 (Existing Building Code), Part 11 (Green Building Standards Code), Part 12 (Referenced Standards Code). The California Building Code is applicable to all development in California. (Health and Safety Code §§ 17950 and 18938(b).)

The regulations receive input from members of industry, as well as the public, with the goal of "[r]educing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy." (Pub. Res. Code § 25402.) These regulations are scrutinized and analyzed for technological and economic feasibility (Pub. Res. Code § 25402(d)) and cost effectiveness (Pub. Res. Code § 25402(b)(2) and (b)(3)).

PART 2 – CALIFORNIA BUILDING CODE: FIRE SAFETY REQUIREMENTS

The State of California provided a minimum standard for building design through the 2022 California Building Standards Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations. The 2022 CBC is based on the 2021 International Building Code, but 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 particular types of construction.

PART 2 – CALIFORNIA BUILDING CODE: WILDLAND-URBAN INTERFACE BUILDING STANDARDS

On September 20, 2005, the Building Standards Commission approved the Office of the State Fire Marshal's emergency regulations amending the CCR Title 24, Part 2, known as the 2007 CBC. These codes include provisions for ignition-resistant construction standards in the WUI.

Interface zones are areas with dense housing adjacent to vegetation that can burn and meeting the following criteria:

1. Housing density class 2 (one house per 20 acres to one house per 5 acres), 3 (more than one house per 5 acres to one house per acre), or 4 (more than one house per acre)
2. In Moderate, High, or Very High Fire Hazard Severity Zone
3. Not dominated by wildland vegetation (i.e., lifeform not herbaceous, hardwood, conifer, or shrub)
4. Spatially contiguous groups of 30-meter cells[33] that are 10 acres and larger

Intermix zones are housing development interspersed in an area dominated by wildland vegetation and must meet the following criteria:

1. Not interface
2. Housing density class 2
3. Housing density class 3 or 4, dominated by wildland vegetation
4. In Moderate, High, or Very High Fire Hazard Severity Zone
5. Improved parcels only
6. Spatially contiguous groups of 30-meter cells 25 acres and larger

Influence zones have wildfire-susceptible vegetation up to 1.5 miles from an interface zone or intermix zone.[34]

While the 2007 CBC creates WUI definitions for interface, intermix and influence zones in order to apply required construction standards, many local and regional entities use their own definitions of WUI areas for other purposes, ranging from simple resident awareness and public outreach to further municipal-level standards.

PART 9 – CALIFORNIA FIRE CODE

The 2022 California Fire Code is Part 9 of CCR Title 24. It establishes the minimum requirements consistent with nationally recognized good practices to safeguard public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structure, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. It is the primary means for authorizing and enforcing

[33] "30-meter cells" refers to satellite mapping or Geographic Information Systems (GIS) data, and indicates data is presented as 30-meter by 30-meter squares in the source maps used to determine zone types.
[34] CAL FIRE. 2019. Wildland Urban Interface (WUI) [map]. Available: https://frap.fire.ca.gov/media/10300/wui_19_ada.pdf (accessed April 2023)

procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The California Fire Code regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The California Fire Code and the California Building Code (CBC) use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines and specialized equipment. To ensure that these safety measures are met, the California Fire Code employs a permit system based on hazard classification. The provisions of this Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such building structures throughout California.

More specifically, the Fire Code is included in CCR Title 24. Title 24, part 9, Chapter 7 addresses fire-resistances-rated construction; CBC (Part 2), Chapter 7A addresses materials and construction methods for exterior wildfire exposure; Fire Code Chapter 8 addresses fire related Interior finishes; Fire Code Chapter 9 addresses fire protection systems; and Fire Code Chapter 10 addresses fire related means of egress, including fire apparatus access road width requirements. Fire Code Section 4906 also contains existing regulations for vegetation and fuel management to maintain clearances around structures. These requirements establish minimum standards to protect buildings located in FHSZs within SRAs and WUI Fire Areas. This code includes provisions for ignition-resistant construction standards for new buildings.

AB 747 and SB 99 (Safety Element Emergency Evacuation Routes Identification)

Assembly Bill (AB) 747 (2019) requires that the safety element be reviewed and updated to identify emergency evacuation routes and their capacity, safety, and viability under a range of emergency scenarios. This will be a requirement for all safety elements or updates to hazard mitigation plans completed after January of 2022.

SB 99 (2019) requires review and update of the safety element to include information to identify residential developments in hazard areas that do not have at least two emergency evacuation routes. In essence, this legislation assists in identifying neighborhoods and households within a hazard area that have limited accessibility. This is intended to assist the City with identifying opportunities to improve connectivity and evacuation capacity (generally).

California Porter-Cologne 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 SWRCB 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 SWRCB and the respective 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 SWRCB and the respective 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 Fire Plan

The Strategic Fire Plan for California is the State's roadmap for reducing the risk of wildfire. The most recent version of the plan was finalized in January 2019 and directs each CAL FIRE Unit to address and meet incremental requirements to achieve four specific goals by 2023, including improving core capabilities, enhancing internal operations, ensuring health and safety, and building an engaged workforce.[35] A core element of the plan is increasing staffing levels from 2.67 employees per position to 3.11 employees per position to ensure adequate staffing during times of increased mobilization.

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. The CAL FIRE Office of the State Fire Marshal provides oversight of enforcement of the California Fire Code as well as overseeing hazardous liquid pipeline safety.

California Multi-Hazard Mitigation Plan

The California Office of Emergency Services (CalOES) prepares the State of California Multi-Hazard Mitigation Plan (SHMP). The SHMP identifies hazard risks and includes a vulnerability analysis and a hazard mitigation strategy. The SHMP is federally required under the Federal Disaster Mitigation Act of 2000 for the State to receive Federal funding. The Federal Disaster Mitigation Act of 2000 requires a State mitigation plan as a condition of disaster assistance.

California Emergency Plan

The foundation of California's emergency planning and response is a Statewide mutual aid system, which is designed to ensure that adequate resources, facilities, and other support is provided to jurisdictions whenever their own resources prove to be inadequate to cope with a given situation.

The California Disaster and Civil Defense Master Mutual Aid Agreement (California Government Code Sections 8555–8561) requires signatories to the agreement to prepare operational plans to use within their jurisdiction, and outside their area. These plans include fire and non-fire emergencies related to natural, technological, and war contingencies. The State of California, all State agencies, all political subdivisions, and all fire districts signed this agreement in 1950.

Section 8568 of the California Government Code, the "California Emergency Services Act," states that "the State Emergency Plan shall be in effect in each political subdivision of the State, and the governing body of each political subdivision shall take such action as may be necessary to carry out the provisions thereof." The Act provides the basic authorities for conducting emergency operations following the proclamations of emergencies by the Governor or appropriate local authority, such as a City Manager. The provisions of the Act are reflected and expanded on by appropriate local emergency ordinances. The Act further describes the function and operations of government at all levels during extraordinary emergencies, including war.

All local emergency plans are extensions of the California Emergency Plan. The State Emergency Plan conforms to the requirements of California's Standardized Emergency Management System

[35] CAL FIRE. 2019. Strategic Fire Plan for California. https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/fire-plan/ (accessed April 2023).

(SEMS), which is the system required by Government Code 8607(a) for managing emergencies involving multiple jurisdictions and agencies. The SEMS incorporates the functions and principles of the Incident Command System (ICS), the Master Mutual Aid Agreement, existing mutual aid systems, the operational area concept, and multi-agency or inter-agency coordination. Local governments must use SEMS to be eligible for funding of their response-related personnel costs under State disaster assistance programs. The SEMS consists of five organizational levels that are activated as necessary, including: field response, local government, operational area, regional, and State. CalOES divides the State into several mutual aid regions. Contra Costa County is located in Mutual Aid Region II, which includes Del Norte, Humboldt, Mendocino, Sonoma, Lake, Napa, Marin, Solano, Contra Costa, San Francisco, San Mateo, Alameda, Santa Clara, Santa Cruz, San Benito, and Monterey Counties.[36]

SB 1241(Safety Element High Fire Risk Assessment)

California Senate Bill (SB) 1241 requires cities and counties to address fire risk in SRAs and Very High FHSZs in the safety element of their general plans. The bill also amended CEQA to direct amendments to the *CEQA Guidelines* Appendix G environmental checklist to include questions related to fire hazard impacts for projects located in or near lands classified as SRAs and Very High FHSZs. In adopting these Guidelines amendments, the Governor's Office of Planning and Research recognized that generally, low-density, leapfrog development may create higher wildfire risks than high-density, infill development.[37] In general, new development that will be contemplated within the General Plan area would not be considered leapfrog development sites, as they are located near existing development.

California Public Resources Code

The California Public Resources Code (PRC) 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; 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 would be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (PRC § 4442);
- Appropriate fire suppression equipment would 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 would be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor would maintain the appropriate fire suppression equipment (PRC § 4427); and
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines would not be used within 25 feet of any flammable materials (PRC § 4431).

[36] CalOES. 2022. Coastal Region Operational Area Assignments. March 2022. Available: https://www.caloes.ca.gov/RegionalOperationsSite/Documents/EMA_ESC_OA_Assignments_Coastal.pdf (accessed April 2023)
[37] "Leapfrog development" describes the construction of new development at a distance from existing developed areas, with undeveloped land between the existing and new development.

California Public Utilities Commission General Order 166

General Order 166 Standard 1.E requires that investor-owned utilities (IOU) develop a Fire Prevention Plan which describes measures that the electric utility will implement to mitigate the threat of power-line fires generally. Additionally, this standard requires that IOUs outline a plan to mitigate power line fires when wind conditions exceed the structural design standards of the line during a Red Flag Warning in a high fire threat area. Fire Prevention Plans created by IOUs are required to identify specific parts of the utility's service territory where the conditions described above may occur simultaneously. Standard 11 requires that utilities report annually to the California Public Utilities Commission (CPUC) regarding compliance with General Order 166.[38] Pacific Gas and Electric Company (PG&E) is the electric utility provider for the City of San Ramon. The most recently available report for PG&E was dated February 24, 2023.[39]

Regional and Local Regulations

BAAQMD Asbestos Demolition, Renovation and Manufacturing Rule

The removal of asbestos-containing building materials 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) asbestos-containing materials or nonfriable asbestos-containing materials that may be damaged must be abated before demolition in accordance with applicable requirements. Friable asbestos-containing materials must be disposed of as asbestos waste at an approved facility. Nonfriable asbestos-containing materials may be disposed of as nonhazardous waste at landfills that accept such wastes.

Association of Bay Area Governments Hazard Mitigation Plan

The Association of Bay Area Governments' multijurisdictional Local Hazard Mitigation Plan for the San Francisco Bay Area was updated in 2010 in partnership with 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, Plan mitigation measures include hazard event planning, emergency preparedness coordination, education, facility upgrades, and monitoring actions.

[38] CPUC. 2017. General Order Number 165. December 2017. Available: http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M209/K552/209552704.pdf (accessed April 2023)

[39] CPUC. 2023. Wildfire Mitigation Plan Compliance. https://energysafety.ca.gov/what-we-do/electrical-infrastructure-safety/compliance/wildfire-mitigation-plan-compliance/#:~:text=Pursuant%20to%20Public%20Utilities%20Code%20Section%208389%20%28d%29,and%20approve%20a%20Wildfire%20Mitigation%20Plan%20Compliance%20Process.#:~:text=Pursuant%20to%20Public%20Utilities%20Code%20Section%208389%20%28d%29,and%20approve%20a%20Wildfire%20Mitigation%20Plan%20Compliance%20Process.# (accessed April 2023).

Contra Costa County Hazard Mitigation Plan

The Contra Costa County Hazard Mitigation Plan (HMP) contains goals and objectives that are intended to reduce loss of life and property from natural disasters.[40] During the planning process, this plan used Federal Emergency Management Agency (FEMA) tools to determine the most likely possible threats would be earthquakes, flooding, landslides, tsunamis, and wildfires in urban interface zones. The HMP identifies mitigation action items that aim to meet objectives and reduce the impacts of these hazards. The Contra Costa County Office of Emergency Services and Contra Costa County Department of Conservation and Development share the lead responsibility for overseeing the Plan implementation and maintenance strategy. Plan implementation and evaluation will be a shared responsibility among all planning partnership members and agencies identified as lead agencies in the mitigation action plans.

Contra Costa County Emergency Operations Plan

The purpose of the Contra Costa County Operational Area (OA) Emergency Operations Plan (EOP) is to provide the basis for a coordinated response before, during, and after an emergency affecting Contra Costa County.[41] The emergency operations plan identifies and facilitates inter-agency coordination in emergency operations. The Plan applies to all emergencies in unincorporated areas of Contra Costa County and within incorporated areas when those emergencies require multi-agency coordination at the operational area level.

Contra Costa Household Hazardous Waste Program

Contra Costa County operates three drop-off locations in the western portion, central portion, and eastern portion of the county. The three facilities allow for residents and qualified small businesses to drop off accepted hazardous waste. Hazardous waste that is accepted includes chemical bottles, acids and caustics, batteries, light bulbs, motor oil, pesticides, and solvents.[42]

Contra Costa County Ordinance Code

Division 450, Hazardous Materials and Wastes, of the Contra Costa County Ordinance Code provides regulations regarding hazardous material response plans, inventories, underground storage, and risk management. In part, this County Ordinance Code division requires that any business that handles a specific quantity of hazardous materials establish a business plan for emergency response to a release or threatened release of a hazardous material.

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: Emergency Services Division coordinates response to emergencies in the County. Emergency response team members respond and work with local fire and police agencies, emergency medical providers, the California Highway Patrol, CAL FIRE, CDFW, and Caltrans.

[40]Contra Costa County. 2018. Contra Costa County Hazard Mitigation Plan.
[41]Contra Costa County. 2018. Emergency Operations Plan. Available: https://www.cocosheriff.org/home/showpublisheddocument/168/637284267426930000 (accessed March 2023)
[42] Contra Costa County. 2022. Available:: http://www.co.contra-costa.ca.us/depart/cd/recycle/options/v5951.htm

San Ramon Municipal Code

The City adopted the California Fire Code and included it in San Ramon Municipal Code Title C, Division C1, Chapter 9.

San Ramon General Plan

The current San Ramon General Plan contained policies related to hazards, hazardous materials, and wildfire, but they would be replaced by the proposed 2040 General Plan.

3.7.4 Impacts and Mitigation Measures

Significance Criteria

The City of San Ramon utilizes the following 2022 CEQA Guidelines Appendix G significance criteria questions related to hazards/hazardous materials and wildfire.

Would the 2040 General Plan:

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 that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?

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, result in a safety hazard or excessive noise for people residing or working in 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?

h) If located in or near State responsibility areas or lands classified as Very High Fire Hazard Severity Zones:

   1. Substantially impair an adopted emergency response plan or emergency evacuation plan?
   2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
   3. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
   4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Approach to Analysis

Environmental impacts related to hazards and hazardous materials and wildfire have been assessed using impact significance criteria from federal, State, and local regulations. The impact analysis is based on available literature regarding the existing plans, policies, and resources in the General Plan area. Criteria used during this analysis are described below.

Hazardous Materials Upset and Exposure Risk

This evaluation focuses on whether the proposed plan would result in changes to the physical environment that would cause or exacerbate adverse effects related to the use, transportation, disposal, accidental release, or emission of hazardous materials. Potential construction-related and operational impacts from existing hazardous materials in soils, sediments, groundwater, surface water, and structures are evaluated using available information from the Department of Toxic Substances Control and the State Water Resources Control Board.

Emergency Evacuation and Response

The City does not have significance thresholds related to emergency access. The City Municipal Code adopts the California Fire Code. The evaluation includes a determination of whether the changes to the physical environment caused by the proposed plan would impair or interfere with emergency response plans.

In addition, pursuant to California Attorney General Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act, this evaluation assesses whether projects located in or near State responsibility areas or lands classified as very high fire hazard severity zones would substantially impair an adopted emergency response plan or emergency evacuation plan.

Wildfire Exposure Risk

The California Department of Forestry and Fire Protection Hazard Severity Maps were consulted in determining San Ramon's proximity to State Responsibility Areas or lands classified as very high fire hazard severity zones. Impacts related to wildfire hazards and risks were evaluated using FHSZ mapping for Contra Costa County, aerial imagery, and topographic mapping. Additionally, weather patterns related to prevailing winds and precipitation trends were evaluated as they relate to the spread and magnitude of wildfire. It was assessed whether the proposed plan would risk exacerbating those existing environmental conditions or causing new direct, indirect, or cumulative impacts to other aspects of the environment.

California Attorney General Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act restates the CEQA requirement that an EIR analyze "any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected," including by locating development in wildfire risk areas. As such, this evaluation assesses whether projects located in or near State responsibility areas or lands classified as very high fire hazard severity zones would exacerbate wildfire risks, and thereby expose people or structures to significant risks during or post wildfire event; require the installation of emergency-related infrastructure; or result in temporary or ongoing impacts to the environment.

EIR Scoping Comments Consideration

This section also addresses comments received from the Department of Toxic Substances Control in response to the EIR NOP related to hazardous waste, hazardous materials, and presence of hazardous materials and are discussed in the impact analysis below in Impact HAZ-1 and HAZ-2.

Specific Significance Thresholds

For purposes of this analysis, the following thresholds are used to evaluate the significance of hazards/hazardous materials and wildfire impacts resulting from implementation of the proposed plan.

- Routine transport, use, and/or dispose of hazardous materials in a manner that would create a significant hazard to the public or the environment.
- Regular transport of hazardous materials to/from the plan areas on an unsuitable road or use of highly volatile hazardous materials, which would create a significant hazard to the public or the environment.
- Location of new development within 0.25 mile of an existing or proposed school in conjunction with hazardous emissions or handle hazardous materials, waste, or substances.
- Location of new development on a hazardous materials sites lists such as CalEPA, California Facility Inventory Database (CA FID) UST and State Water Efficiency and Enhancement Program (SWEEP), HAZNET, California DTSC EnviroStor, BAAQMD, and/or the SWRCB GeoTracker regulated facilities databases for files related to possible Recognized Environmental Conditions.
- Location of new development within an airport land use plan or within two miles of a public airport and reduction of safety of people working or residing in the plan areas.
- Impairing implementation of or interfere with an adopted emergency response plan or emergency evacuation plan via blockage of an evacuation route or provision of only one access point for emergency vehicles.
- Placement of housing or offices in a designated WUI zone or proximate to unmanaged open space area that is susceptible to wildfires.
- Impaired implementation of or interference with an adopted emergency response plan or emergency evacuation plan via blockage of an evacuation route or provision of only one access point for emergency vehicles.
- Location of new development in or near area of steep slopes, high-wind areas, or historical wildfire burn areas leading to greater wildfire risk and, thereby, exposing occupants to smoke and other wildfire-related air pollutants.
- Installation or maintenance of roads, fuel breaks, emergency water sources, electrical power lines, or natural gas lines that may exacerbate fire risk.
- Location of new development in or near area of wildfire-scarred slopes or altered drainage areas and, thereby, exacerbating flooding and landslide hazards.

Impact Evaluation

Hazardous Materials Upset and Exposure

Significance Criterion a:	Would the proposed plan create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
Significance Criterion b:	Would the proposed plan 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?
Significance Criterion c:	Would the proposed plan emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

Impact HAZ-1 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN COULD RESULT IN THE RELEASE OF POTENTIALLY HAZARDOUS MATERIALS, WHICH MAY OCCUR WITHIN 0.25 MILE OF A SCHOOL. HOWEVER, COMPLIANCE WITH LOCAL, REGIONAL, STATE, AND FEDERAL REGULATIONS RELATED TO HAZARDOUS MATERIALS WOULD MINIMIZE THE RISK OF RELEASES AND EXPOSURE TO THESE MATERIALS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The use of hazardous materials is typically associated with industrial land uses. Activities such as manufacturing, plating, cleaning, refining, and finishing, frequently involve chemicals that are considered hazardous when accidentally released into the environment.

To a lesser extent, hazardous materials may also be used by various commercial enterprises, as well as residential uses. In particular, dry cleaners use cleaning agents considered to be hazardous materials. Hardware stores typically stock paints and solvents, as well as fertilizers, herbicides, and pesticides. Swimming pool supply stores stock acids, algaecides, and caustic agents. Most commercial businesses occasionally use commonly available cleaning supplies that, when used in accordance with manufacturers' recommendations, are considered safe by the State of California, but when not handled properly can be considered hazardous. Private residences also use and store commonly available cleaning materials, paints, solvents, swimming pool and spa chemicals, as well as fertilizers, herbicides, and pesticides.

If improperly handled, hazardous materials can result in public health hazards through human contact with contaminated soils or groundwater, or through airborne releases in vapors, fumes, or dust. There is also the potential for accidental or unauthorized releases of hazardous materials that would pose a public health concern. The use, transport, and disposal of hazardous materials and wastes are required to occur in accordance with Federal, State, and local regulations. In accordance with such regulations, the transport of hazardous materials and wastes can only occur with transporters who have received training and appropriate licensing. Additionally, hazardous waste transporters are required to complete and carry a hazardous waste manifest, which includes forms, reports, and procedures designed to seamlessly track hazardous waste.

Additional protective regulations apply to projects that could use or disturb potentially hazardous products near or at schools. The California Public Resources Code requires projects that would be located within 0.25 mile of a school and might reasonably be expected to emit or handle hazardous

materials to consult with the school district regarding potential hazards. Numerous day care facilities, charter schools, and private schools are also located throughout San Ramon.

Construction

Construction associated with the 2040 General Plan would primarily consist of infill and development construction throughout San Ramon. Infill and development construction can involve demolition of existing structures. Demolition could result in emission of lead and asbestos if building materials contain these substances. However, lead-based materials and asbestos exposure are regulated by the CalOSHA. CCR Section 1532.1 requires testing, monitoring, containment, and disposal of lead-based materials such that exposure levels do not exceed CalOSHA standards. Under this rule, construction workers (and by extension, neighboring properties) may not be exposed to lead at concentrations greater than 50 micrograms per cubic meter of air averaged over an eight-hour period and exposure must be reduced to lower concentrations if the construction workday exceeds eight hours. Similarly, CCR Section 1529 sets requirements for asbestos exposure assessments and monitoring, methods of complying with exposure requirements, safety wear, communication of hazards, and medical examination of workers.

The control of asbestos during demolition or renovation of buildings is regulated under the Federal Clean Air Act. The Federal Clean Air Act requires a thorough inspection for asbestos where demolition will occur and specifies construction work practices to control emissions, such as removing all asbestos-containing materials, adequately wetting all regulated asbestos-containing materials, sealing the material in leak tight containers and disposing of the asbestos-containing waste material as expediently as practicable.[43] Compliance with applicable standards would ensure construction impacts related to hazardous materials, specifically asbestos, release would be less than significant.

Friable ACMs are regulated as a hazardous air pollutant under the Clean Air Act. As a construction worker safety hazard, they are also regulated under the authority of CalOSHA and by the Bay Area Air Quality Management District. In structures that would be demolished, any ACMs would be abated in accordance with State and Federal regulations prior to the start of demolition or renovation activities and in compliance with all applicable existing rules and regulations, including the Bay Area Air Quality Management District. These programs would ensure that asbestos removal would not result in the release of hazardous materials to the environment that could impair human health. As such, construction impacts related to hazardous materials, specifically ACMs, release would be less than significant.

Fluorescent lighting ballasts manufactured prior to 1978, and electrical transformers, capacitors, and generators manufactured prior to 1977, may contain PCBs. In accordance with the Toxic Substances Control Act and other federal and State regulations, individual projects would be required to properly handle and dispose of electrical equipment and lighting ballasts that contain PCBs during demolition of older buildings, ensuring that construction impacts related to hazardous materials, specifically PCBs, release would be less than significant.

The use of construction machinery would involve the transport, use, and disposal of hazardous materials such as paints, solvents, oils, grease, and caulking. Additionally, hazardous materials would be needed for fueling and servicing construction equipment. These types of hazardous materials are not acutely hazardous, and all storage, handling, use, and disposal of these materials

[43] USEPA. 2021. Asbestos Laws and Regulations. Available: https://www.epa.gov/asbestos/asbestos-laws-and-regulations (accessed April 2022)

are regulated by County, State, and Federal regulations and compliance with applicable standards discussed under Section 3.7.3, *Regulatory Framework*, would ensure construction impacts related to the transport, use, and disposal of hazardous materials would be less than significant.

Compliance with existing applicable regulations and policies would minimize risks from routine use, transport, handling, storage, disposal, and release of hazardous materials during construction. Oversight by the appropriate federal, State, and local agencies and compliance by new development with applicable regulations related to the handling and storage of hazardous materials would minimize the risk of the public's potential exposure to these substances. There are 21 schools located within the General Plan area. Eleven of these schools, as shown in Figure 3.7-2 are located near an identified hazardous materials transportation route. However, transport of hazardous materials along the I-680 and southern Alcosta Boulevard and Dougherty Road routes would be subject to federal, State, and local regulations as discussed under Section 3.7.3, *Regulatory Framework,* that would reduce potential impacts of hazardous materials releases proximate to schools. Therefore, 2040 General Plan construction impacts related to a hazard to the public or the environment through routine transport, use, or disposal of hazardous materials or reasonably foreseeable upset and/or accidental release of hazardous materials, including within 0.25 mile of a school, would be less than significant.

Operation

Development facilitated by the 2040 General Plan would result in the addition of residential units and non-residential development throughout San Ramon. Housing and other residential uses do not utilize substantial quantities of hazardous materials and, thereby, pose little risk of exposing the public to hazardous materials. Commercial, office, and semi-public development would be subject to compliance with CCR, Cal OSHA, and other agencies to ensure hazardous materials risks to the public are minimized during operational use and transport as well.

The proposed plan would facilitate residential and non-residential development in the vicinity of some existing schools. However, the various land uses facilitated by the 2040 General Plan would be required to comply with applicable laws and regulations for the handling of hazardous materials. These land uses would not emit large quantities of hazardous materials or substances. Development of sites within San Ramon may have pre-existing contamination and would be remediated through coordination with the appropriate regulatory agency pursuant to federal, State, and local regulations as listed in Section 3.7.3, *Regulatory Framework*.

Compliance with existing applicable regulations and policies would minimize risks from routine use, transport, handling, storage, disposal, and release of hazardous materials. Oversight by the appropriate federal, State, and local agencies and compliance by new development with applicable regulations related to the handling and storage of hazardous materials would minimize the risk of the public's potential exposure to these substances. While I-680 and southern Alcosta Boulevard and Dougherty Road are located near eleven schools, transport of hazardous materials along these routes would be subject to federal, State, and local regulations as listed in Section 3.7.3, *Regulatory Framework,* that would reduce potential impacts of releases proximate to schools. Therefore, 2040 General Plan operational impacts related to a hazard to the public or the environment through routine transport, use or disposal of hazardous materials or reasonably foreseeable upset and/or accidental release of hazardous materials, including within 0.25 mile of a school, would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Hazardous Materials Site Risks

Significance Criterion d:	Would the proposed plan be located on a site that is included on a list of hazardous material 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?

Impact HAZ-2 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN COULD RESULT IN DEVELOPMENT ON SITES CONTAMINATED WITH HAZARDOUS MATERIALS. HOWEVER, COMPLIANCE WITH APPLICABLE REGULATIONS RELATING TO SITE REMEDIATION WOULD MINIMIZE IMPACTS FROM DEVELOPMENT ON CONTAMINATED SITES, RESULTING IN A LESS THAN SIGNIFICANT IMPACT.

Construction

Given that potential construction sites are required by DTSC and the Regional Water Quality Control Board to be remediated and/or capped in a manner deemed appropriate by the responsible agency prior to construction activities occurring, construction impacts would be reduced through federal, State, and local regulations. Therefore, the 2040 General Plan would not create a hazard to the public or environment during construction, and impacts related to locating buildings within the General Plan area on a hazardous materials site per Government Code Section 65962.5 would be less than significant.

Operation

Existing sites that use or have previously used hazardous materials or that may contain contaminants in soils or groundwater in San Ramon include large- and small-quantity generators of hazardous waste, such as gas stations, dry cleaners, and industrial uses. Specifically, there are four sites containing or potentially containing hazardous materials contamination located in San Ramon, two of which are not considered to be active sites. Potential development facilitated by the 2040 General Plan on identified hazard sites would be preceded by investigation, remediation, and cleanup under the supervision of the Regional Water Quality Control Board, the Contra Costa Health Services, or DTSC, before any development activities could begin as currently required by federal, State, and local regulations. The agency responsible for oversight would determine the types of remediation and cleanup required and could include excavation and off-haul of contaminated soils, installation of vapor barriers beneath habitable structures, continuous monitoring wells onsite with annual reporting requirements, or other mechanisms to ensure the site does not pose a health risk to workers or future occupants. Compliance with the following 2040 General Plan Traffic and Circulation and Safety Element guiding policies and implementing policies would also apply to future development facilitated by the 2040 General Plan:

TRAFFIC AND CIRCULATION ELEMENT

Policy 5.4-I-9 Specify hauling routes for transporting hazardous materials that minimize the risk to people and property.

SAFETY ELEMENT

Guiding Policy9.3-G-1: Minimize the risk of property damage and personal injury resulting from the production, use, storage, disposal, or transportation of hazardous materials.

Policy 9.3-I-1 Promote the reduction, recycling, and safe disposal of household hazardous wastes through public education and awareness.

Policy 9.3-I-2 Continue to provide convenient, local opportunities for household hazardous waste (HHW) drop-off and pick-up service to San Ramon residents.

Policy 9.3-I-3 Require the clean-up of sites contaminated with hazardous substances.

Policy 9.3-I-4 Support and implement policies contained in the Contra Costa County Hazardous Waste Management Plan that encourage and assist the reduction of hazardous waste from businesses and homes in San Ramon.

Policy 9.3-I-5 Require businesses generating hazardous waste to pay necessary costs for local implementation of programs specified in the County Hazardous Waste Management Plan, as well as the costs associated with emergency response services for a hazardous materials release.

Policy 9.3-I-6 Work with the San Ramon Valley Fire Protection District and Contra Costa County to minimize potentially dangerous conditions from storing, dispensing, using and handling of hazardous materials.

It is also possible that underground storage tanks (UST) in use prior to permitting and record keeping requirements may be present in the General Plan area. If an unidentified UST were uncovered or disturbed during construction activities, it would be removed under permit from the City; if such removal would potentially undermine the structural stability of existing structures, foundations, or impact existing utilities, the tank might be closed in place without removal. Tank removal activities could pose both health and safety risks, such as the exposure of workers, tank handling personnel, and the public to tank contents or vapors. Potential risks, if any, posed by USTs would be minimized by managing the tank according to existing standards contained in Division 20, Chapters 6.7 and 6.75 (UST Program) of the California Health and Safety Code as enforced and monitored by the Environmental Programs Division.

The extent to which groundwater may be affected by an UST or other potential contamination source, if at all, depends on the type of contaminant, the amount released, the duration of the release, distance from source, and depth to groundwater. If groundwater contamination is identified, characterization of the vertical and lateral extent of the contamination and remediation activities would be required by the Regional Water Quality Control Board prior to the commencement of potential future project construction activities that would disturb the subsurface. If contamination exceeds regulatory action levels, the respective developer would be required to undertake remediation procedures prior to grading and development under the supervision of the Regional Water Quality Control Board, depending upon the nature of any identified contamination. Compliance with existing State and local regulations would result in the 2040 General Plan not increasing the likelihood for development of identified hazard sites compiled

pursuant to Government Code Section 65962.5. Therefore, the 2040 General Plan would not create a hazard to the public or environment during operation, and impacts related to locating buildings within the General Plan area on a hazardous materials site per Government Code Section 65962.5 would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Aviation Hazards

Significance Criterion e:	For location 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 proposed plan result in a safety hazard or excessive noise for people residing or working in the plan areas?

Impact HAZ-3 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD NOT BE LOCATED WITHIN AN AIRPORT LAND USE PLAN OR WITHIN TWO MILES OF AN AIRPORT. NO IMPACTS WOULD OCCUR.

Construction and Operation

The nearest airport to San Ramon (the General Plan area) is the Livermore Municipal Airport, located approximately seven miles southeast from San Ramon. There are no flight paths, airport noise contours, or airport-restricted development zones that overlap with San Ramon. Therefore, no 2040 General Plan construction and operational impact related to airport safety hazards or excessive aviation noise exposure would occur.

Mitigation Measures

No mitigation is required.

Level of Significance

No Impact

Emergency Response and Evacuation Plans Consistency

Significance Criterion f:	Would the proposed plan impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
Significance Criterion h:	If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the proposed plan: 1. Substantially impair an adopted emergency response plan or emergency evacuation plan?

Impact HAZ-4 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD RESULT IN ADDITIONAL POPULATION AND VEHICLE MILES TRAVELED IN THE CITY. THE PROPOSED PLAN COULD RESULT IN CHANGES TO EMERGENCY EVACUATION ROUTES OR WOULD SUBSTANTIALLY INCREASE ROADWAY CONGESTION SUCH THAT THE USE OF AN EVACUATION ROUTE WOULD BE HINDERED. ADHERENCE TO EXISTING HAZARD MITIGATION PLANS AND EVACUATION PLANS WOULD REDUCE RISK OF HINDERING EVACUATION ROUTE USE. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Potential construction related to implementation of the 2040 General Plan is expected to entail construction equipment and vehicles that would access and leave the plan area, which in turn could potentially temporarily impede evacuation or emergency vehicle access. However, as discussed under Impact TRA-4 in Section 3.12, *Transportation*, the proposed plan would result in less-than-significant impacts related to emergency vehicle access. In addition, the proposed plan would comply with the Contra Costa County Emergency Operation Plan and Contra Costa County Local Hazard Mitigation Plan, ensuring efficient response to emergency incidents associated with emergencies affecting San Ramon. In addition, future projects that would undergo project-level CEQA review would prepare a construction management plan to ensure adequate transportation circulation and access throughout the construction period. Therefore, construction impacts related to emergency response and evacuation would be less than significant.

Operation

Contra Costa County implements the Contra Costa County EOP, which addresses the response to emergency incidents associated with emergencies affecting Contra Costa County, including San Ramon. The County EOP establishes the emergency management organization for emergency response, establishes operational concepts associated with emergency management, and provides a flexible platform for planning emergency response in the County. Consistent with the County EOP goals (Save Lives, Protect Property, Preserve the Environment, and Restore Essential Services) and objectives (Mitigate Hazards, Meet Basic Human Needs, Address Needs of People with Disabilities and Others with Access and Functional Needs, and Support Community and Economic Recovery), development facilitated by the 2040 General Plan would provide two vehicle access points and adequate fire truck and apparatus turning radii and clearance for purposes of adequate emergency access and response within San Ramon. As such, implementation of emergency response and evacuation procedures would not be affected as a result of development facilitated by the 2040 General Plan. Compliance with the following 2040 General Plan Safety Element policies and program would reduce potential impediment of implementation of wildfire emergency response and evacuation:

Guiding Policy 9.1-G-1: Maintain and update the emergency mitigation, preparedness, response, and recovery components of the emergency management procedures in San Ramon.

Policy 9.1-I-1 Maintain and update the City's Emergency Operations Plan, as required by State and Federal laws, to minimize the risk to life and property from seismic and geologic hazards, hazardous materials and waste, fire, landslide, dam failure, flood, and national security emergency.

Policy 9.1-I-2 Coordinate with the San Ramon Valley Citizens Council, the San Ramon Valley Fire Protection District, and other organizations and agencies to maintain and disseminate emergency preparedness information via NixleAlerts, social media, and community meetings.

Policy 9.1-I-3 Coordinate regular exercises and drills with emergency organizations. Provide training opportunities for all City staff to be adequately trained to Federal, State, and local procedures.

Policy 9.1-I-4 Require new residential development in identified high risk hazard areas to provide a minimum of two emergency evacuation routes.

Policy 9.1-I-5 Support regular evacuation trainings with identified single-access residential developments, identified in Figure 9-2, typically including evacuation information, emergency supply lists, and first aid resources.

Policy 9.1-I-6 Proactively engage with identified single-access residential developments, identified in Figure 9-2, to encourage home retrofits to meet current building standards on structure hardening.

Policy 9.1-I-7 Prioritize outreach efforts and work with local agencies and organizations during hazardous events to address the specific needs of populations most affected and/or unable to easily adapt in the community such as seniors, young children, individuals with physical disabilities, and communities with single – access residential developments, identified in Figure 9-2.

Policy 9.1-I-8 Work with the San Ramon Valley Fire Protection District to identify and update the Evacuation Plan, at a minimum, every eight years to account for all types of emergencies.

Guiding Policy 9.5-G-1: Minimize the risks to lives, property, and natural environment due to fire hazards.

Policy 9.5-I-1 Require site design features, where appropriate based on a wildfire risk assessment, and fire retardant building materials to reduce the risk of fire within the City.

Policy 9.5-I-2 Require the completion of a Fire Protection Plan for new development adjacent to a Fire Hazard Area and within designated High Fire Hazard Areas in order to determine which mitigation measures are appropriate to minimize fire hazard.

Policy 9.5-I-3 Work with the Fire Protection District on planning for a new training facility at an appropriate location where neighborhood impacts would be mitigated

Policy 9.5-I-4 Require sprinklers in new homes, as required by the California Building Code.

Policy 9.5-I-5 Require sprinklers in all mixed-use development, as required by the California Building Code.

These 2040 General Plan policies requiring adequate fire suppression water pressure and identified wildfire evacuation routes as well as the County EOP would ensure coordination among federal, State, and local plans and agencies, adequate public and interagency communication during hazard events, and providing evacuation assistance for those with limited mobility or lack of access to a vehicle for evacuation.

The 2040 General Plan does not propose physical changes such as realigned or closed-off roadways or changes in general transportation circulation and access that would interfere or impair emergency response or evacuation within or through the plan areas. As such, the proposed plan

would also not result in changes to emergency evacuation routes such that use of an evacuation route, including I-680, would be hindered.

Development facilitated by the proposed plan would accommodate future population growth and would increase vehicle miles traveled in the General Plan area. This could lead to increased roadway congestion during emergency evacuations. However, the City would review and approve projects within the General Plan area to ensure that emergency access meets City standards. Development facilitated by the proposed plan would also comply with City road standards and would be reviewed by the Contra Costa County Fire Protection District to ensure development would not interfere with evacuation routes and would not impede the effectiveness of evacuation plans.

Although the 2040 General Plan includes policies and programs that would address emergency response and emergency evacuation, compliance with AB 747 and SB 99 is not currently available. The 2040 General Plan operational impacts related to impairment of an adopted emergency response plan or emergency evacuation plan would be less than significant with adherence to the existing Contra Costa County Hazard Mitigation Plan and evacuation plans for San Ramon.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant

Wildfire Exposure/Exacerbation Risk

Significance Criterion g:	Would the proposed plan expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?
Significance Criterion h:	If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the proposed plan: 2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? 3. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? 4. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Impact HAZ-5 SAN RAMON IS NOT LOCATED WITHIN OR NEAR A VERY HIGH FIRE HAZARD SEVERITY ZONE OR STATE RESPONSIBILITY AREA; HOWEVER, PORTIONS OF SAN RAMON ARE LOCATED IN AND NEAR A HIGH FIRE HAZARD SEVERITY ZONE, A LOCAL RESPONSIBILITY AREA, AND AREAS OF VEGETATED OPEN SPACE. MITIGATION AND COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS WOULD REDUCE THE RISK OF LOSS, INJURY, OR DEATH FROM WILDFIRE. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Construction

Impacts related to wildfire hazard risks affecting people, structures, or emergency response and evacuation plans are limited to operational impacts. No construction impacts would occur.

Operation

The San Ramon Planning Area (i.e., the General Plan area) is surrounded by hillsides and ridges. San Ramon is not located in or near a Very High Fire Hazard Severity Zone (VHFHSZ) in or near[44] a State Responsibility Area. However, the northwesternmost portion of the General Plan area is the nearest VHFHSZ in a State Responsibility Area. There are also high fire hazard severity zones in a State Responsibility Area located within the southwestern and eastern portions of San Ramon City Limits and in areas adjacent to City Limits within the San Ramon Planning Area and further to the east.

Development facilitated by the 2040 General Plan would be subject to the California Fire Code, which includes safety measures to minimize the threat of fire such as noncombustible or ignition-resistant building materials for exterior from the surface of the ground to the roof system and sealing any gaps around doors, windows, eaves, and vents to prevent intrusion by flame or embers. Fire sprinklers would also be required in residential developments pursuant to the Contra Costa County Code. Construction would also be required to meet CBC requirements, including CCR Title 24, Part 2, which includes specific requirements related to exterior wildfire exposure. In addition, the Board of Forestry, via CCR Title 14, sets forth the minimum development standards for emergency access, fuel modification, setback, signage, and water supply; this help prevent loss of structures or life by reducing access limitations for purposes of accessing and suppressing wildfire locations. Furthermore, the Board of Forestry, via CCR Title 14, sets forth the minimum development standards for emergency access, fuel modification, setback, signage, and water supply, which help prevent loss of structures or life by reducing wildfire hazards.

Section 3.13, *Utilities and Service Systems,* discusses the Urban Water Management Plans for both DSRSD and EBMUD and determined that there are sufficient water supplies to accommodate the anticipated population growth throughout their respective service areas according to ABAG Plan Bay Area 2040 projections. In addition, the General Plan area is located in urbanized parts of both the DSRSD and EBMUD service areas. As discussed under Impact UTIL-2, there would be sufficient water supplies available to serve the 2040 General Plan and reasonably foreseeable future development during normal, dry, and multiple dry years. In compliance with the California Fire Code, Part 9 of the California Building Standards Code (CBC), development facilitated under both plans would follow standards for fire safety such as fire flow requirements for buildings, fire hydrant location, and distribution criteria. Other impacts related to wildfire that would result from specific project development characteristics would be considered when the City reviews those specific development proposals.

In addition, compliance with the following 2040 General Plan Safety Element guiding policies and implementing policies would also help reduce potential wildfire risk to people and structures and wildfire exacerbation:

[44] For purposes of this EIR analysis, "near" is defined as within two miles.

Guiding Policy 9.5-G-1: Minimize the risks to lives, property, and natural environment due to fire hazards.

Policy 9.5-I-1 Require site design features, where appropriate based on a wildfire risk assessment, and fire retardant building materials to reduce the risk of fire within the City.

Policy 9.5-I-2 Require the completion of a Fire Protection Plan for new development adjacent to a Fire Hazard Area and within designated High Fire Hazard Areas in order to determine which mitigation measures are appropriate to minimize fire hazard.

Policy 9.5-I-3 Work with the Fire Protection District on planning for a new training facility at an appropriate location where neighborhood impacts would be mitigated

Policy 9.5-I-4 Require sprinklers in new homes, as required by the California Building Code.

Policy 9.5-I-5 Require sprinklers in all mixed-use development, as required by the California Building Code.

Nonetheless, given that the General Plan area and adjacent areas have some areas of hillsides and ridges surrounded by or containing vegetation and that the proposed plan could result in additional above-ground electrical lines to serve increased development, development facilitated by the 2040 General Plan could be prone to and exacerbate wildfires. And with California experiencing severe drought, the open space areas in and adjacent to San Ramon can experience higher fuel loads in the form of dry vegetation, and higher fuel loads combined with winds could result in the spread of wildfire to proximate development within the General Plan area. Existing codes and regulations cannot guarantee that wildfires would not occur or damage structures and harm occupants. This represents a significant wildfire exposure and exacerbation risk impact. With implementation of Mitigation Measure HAZ-1 also requiring landscape and slope stability design review, the risk of loss of structures and the risk of injury or death due to wildfires would be reduced. This measure would make San Ramon less vulnerable to loss in the event of a wildfire. Therefore, with implementation of Mitigation Measure HAZ-1 and compliance with existing regulations, impacts would be less than significant with mitigation.

Mitigation Measures

MITIGATION MEASURE HAZ-1 CONDUCT PROJECT LANDSCAPE AND SLOPE DESIGN WILDFIRE RISK REDUCTION

The City shall require projects adjacent to High Fire Hazard Zones to conduct landscape and slope design wildfire risk reduction. Project landscape plans (as made available when project applications are submitted) shall include fire-resistant vegetation native to Contra Costa County and/or the local microclimate of the site and prohibit the use of fire-prone species especially non-native, invasive species. Also, if a project site is within a known landslide area (see Figure 3.5-5 in Section 3.5, *Geology and Soils*), the site shall be subject to geotechnical review regarding potential post-fire slope instability.

Level of Significance

Less than significant with mitigation

3.7.5 Cumulative Impacts

The geographic scope of the cumulative hazards, hazardous materials, and wildfire analysis is the General Plan area and the vicinity of the plan area. The cumulative analysis considers the nearby past, present, and reasonably foreseeable future plans and projects listed in Table 3-1 (refer to Chapter 3, *Environmental Impact Analysis*) located in San Ramon and surrounding areas in addition to the proposed plan.

Hazardous Materials Exposure Risk

In general, exposure to hazardous materials may cause localized adverse effects. A combination of federal, State, and local regulations limit or minimize the potential for exposure to hazardous materials. Cumulative plans and projects listed in Table 3-1 consist predominantly of general plan buildouts, area plan buildout, and active transportation projects. The types and sizes of development anticipated in the City of San Ramon would not involve large quantities of hazardous materials or activities that transport or handle hazardous materials nor be sited on known hazardous materials sites. In addition, there are no land uses in the vicinity of the plan area that are known to utilize large quantities of hazardous materials or involve hazardous activities. However, cumulative plans and projects may include demolition of structures that have the potential to contain hazardous building materials. Building materials may contain asbestos and lead-based paint. To address potential release of hazardous materials, the City would require applicants to assess structures and impose standard mitigation (required testing, removal, and proper disposal) to minimize release prior to any demolition. Therefore, there would be a less than significant cumulative impact associated with hazardous materials exposure risk.

Emergency Response/Evacuation Plans Consistency

As part of project approval for the cumulative projects, the City would assess the need for fire protection services, which would inform efforts to improve or expand needed facilities. Cumulative development would comply with emergency access requirements as directed by respective city and fire department regulations. The cumulative projects would not result in permanent road closures, nor impede an established emergency or evacuation access route, such as I-680, or interfere with emergency response requirements established by the respective city general plans. As described under Impact HAZ-4, the proposed plan would not result in significant and unavoidable impacts related to emergency response and evacuation plans consistency. Therefore, the cumulative impact related to emergency response and evacuation plans consistency is less than significant.

Wildfire Exposure and Exacerbation Risk

A combination of federal, State, and local regulations limit or minimize the potential for exposure to wildfires by reducing the amount of development in wildland urban interface areas, ensuring new development is developed according to California Building Code and California Fire Code, and incorporating requirements for fire-safe construction into the land use planning. The types and sizes of cumulative development may be located in designated High Fire Hazard Zones. Plans and projects would be located in areas that are already developed, do not contain significant levels of dry fuel susceptible to ignition, or significantly high average wind speed. Furthermore, cumulative plans and projects would result in predominantly in-fill development and not significantly increase emergency services beyond existing service areas. Cumulative project construction would adhere to respective city building codes designed to minimize potential for uncontrolled fires. Adherence to respective city building codes would ensure that California Fire Code standards including automatic sprinkler

systems are included. Mitigation Measure HAZ-1 would make San Ramon less vulnerable to loss in the event of a wildfire. With mitigation and compliance with existing regulation, impacts related to wildfire exposure risk would be less than significant with mitigation.

Aviation-related Hazards and Excessive Noise Exposure

Since there is no plan-level impact related to aviation hazards and excessive aviation noise exposure, there would also be no cumulative impact for this topic.

Overall Level of Cumulative Significance

Less than significant with mitigation

3.8 Hydrology and Water Quality

3.8.1 Introduction

This section describes the existing hydrology and water quality setting in the region and General Plan area as well as the relevant regulatory framework. This section also evaluates the possible impacts related to hydrology and water quality that could result from implementation of the proposed 2040 General Plan Update. This section is based on the East Bay Municipal Utility District (EBMUD) Urban Water Management Plan (UWMP), Dublin San Ramon Services District (DSRSD) UWMP, and the San Francisco Bay (Region 2) Regional Water Quality Control Board (SFBRWQCB) Water Quality Control Plan (Basin Plan),[1] San Ramon General Plan and Municipal Code, San Ramon National Pollutant Discharge Elimination System (NPDES) permit and associated Stormwater Pollution Prevention Plan (SWPPP), and Contra Costa County Clean Water Program .

3.8.2 Environmental Setting

Surface Water Hydrology and Drainage

Surface water "hydrology" refers to how water moves across the surface of land, whereas "stormwater" refers to water that occurs on the surface in response to storm events. In the General Plan area, surface water hydrology is defined by existing development and stormwater management, which is provided through operation and maintenance of the existing stormwater drainage system, comprised of drainage control improvements including but not limited to pipes, culverts, and storage tanks of the stormwater management system. As such, the natural watershed drainage has been highly modified by existing development. The General Plan area is within two watersheds: the Walnut Creek Watershed and the Alameda Creek Watershed (see Figure 3.8-1):

Walnut Creek Watershed. The Walnut Creek Watershed drains the northwestern portion of the General Plan area and conveys runoff into Suisun Bay and the Pacific Ocean via major tributaries including San Ramon Creek, Bollinger Creek, and San Catanio Creek.[2] San Ramon Creek meanders northward through Danville and Alamo and joins Walnut Creek, which discharges into Suisun Bay near Martinez. Other surface water features include Las Trampas Creek, Lafayette Creek, Grayson Creek, Murderer's Creek, Pine Creek, and Galindo Creek.[3]

Alameda Creek Watershed. The Alameda Creek Watershed drains most of the General Plan area through surface water features including South San Ramon Creek, Alamo Creek, and Tassajara Creek. These drainages convey flows to Arroyo De La Laguna in Pleasanton and ultimately to Alameda Creek in Sunol, which outlets to San Francisco Bay in Fremont. Alameda Creek Watershed drains both incorporated and unincorporated areas, including Southern San Ramon, Bishop Ranch, the southern portion of Twin Creeks, the Westside, the Dougherty Hills, the Dougherty Valley, and the Tassajara Valley.[4]

[1] San Francisco Bay RWQCB. 2023. Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin. March 7. Available: https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html#basinplan (April 2023).
[2] Ibid.
[3] Contra Costa County. 2018. Contra Costa County Hazard Mitigation Plan. Volume 1 – Planning Area-Wide Elements. January. Available: https://www.contracosta.ca.gov/DocumentCenter/View/48893/Contra-Costa-County-Draft-Local-Hazard-Mitigation-Plan-Volume-1-January-31-2018?bidId= (April 2023).
[4] San Ramon, City of. 2010. Draft Environmental Impact Report for the City of San Ramon General Plan 2030. April 5. https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_10826046/File/Our%20City/Departments/Community%20Development/Planning/General%20Plan/General%20Plan%202030/(2)%20San%20Ramon%20General%20Plan%202030%20EIR.pdf (April 2023).

General Plan Area

The General Plan area is located within the Walnut Creek Watershed and Alameda Creek Watershed. As introduced above, surface waters in the Walnut Creek Watershed include San Ramon Creek, Bollinger Creek, San Catanio Creek, Walnut Creek, Las Trampas Creek, Lafayette Creek, Grayson Creek, Murderer's Creek, Pine Creek, and Galindo Creek, and surface waters in the Alameda Creek Watershed include South San Ramon Creek, Alamo Creek, and Tassajara Creek.

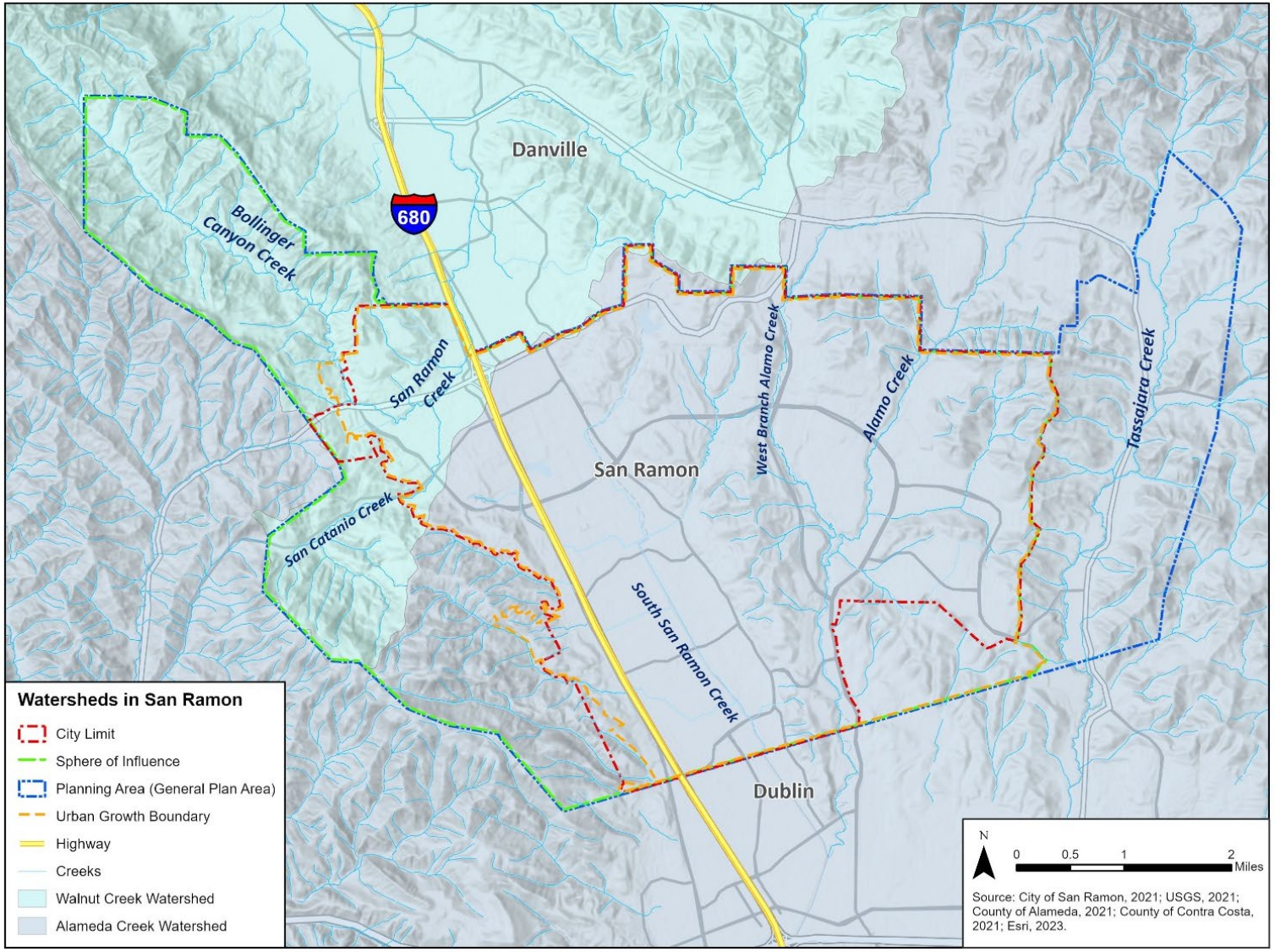
Stormwater drainage within the General Plan area is conducted via sewers, ditches, and drainage channels that wind through the San Ramon Planning Area. Surfaces that are impervious, such as concrete, asphalt, and structures, are solid and impenetrable by water, such that stormwater runoff flows across them without filtering through to the subsurface. When stormwater runoff moves across impervious surfaces, it gains velocity and volume as the flow progresses and accumulates Pervious surfaces that facilitate infiltration of stormwater runoff include porous soil, vegetated areas such as lawns and parks, and unlined stormwater drainage channels.

Within the General Plan area, the extent of pervious surfaces varies depending upon the development type present. Within fully developed areas, as much as 100 percent of the ground surface is impervious, whereas in parks, designated open space areas, hillsides, and residential backyards, the ground surfaces are predominately permeable. Based on review of aerial imagery, approximately 75 percent of the General Plan area is characterized by development and the associated impervious surfaces including roads, other paved areas, structures, and other impervious surfaces. Stormwater drainage facilities are maintained by the City, and best management practices (BMPs) are installed on a project-specific basis to provide adequate drainage within and from individual project sites, and to avoid straining the city-wide drainage facilities consisting primarily of pipes, catch basins, pump stations, and manholes, as well as developed and undeveloped surface drainages (creeks and ditches) that route surface water runoff through San Ramon.

The creeks in San Ramon are effective at moving water under normal storm conditions; however, during torrential rains the creeks may reach their capacity and flooding may occur, particularly if any of these waterways become obstructed.[5] To reduce potential flood hazards, the City of San Ramon Public Works Department staff regularly inspect its public facilities, including but not limited to storm drains, ditches, and creeks, throughout the year. Each autumn San Ramon removes naturally-occurring debris and illegally dumped materials from the City's drainage facilities.[6]

[5] San Ramon, City of. 2023. Flood Control Program. https://www.sanramon.ca.gov/our_city/departments_and_divisions/public_works/storm_drainage_water/flood_control_program (April 2023).
[6] Ibid.

Figure 3.8-1 Surface Waters and Watershed Areas in General Plan Area



Surface Water Quality

San Ramon is located within the Suisun Basin under the jurisdiction of the San Francisco Bay Basin (Region 2) RWQCB, which manages beneficial uses and associated water quality objectives, as well as strategies for achieving these objectives, in accordance with the Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin.[7] The San Francisco Bay RWQCB also administers the NPDES stormwater permitting program and regulates stormwater in the San Francisco Bay Basin.

General Plan Area

The City of San Ramon is a permittee under the Phase II NPDES Municipal Stormwater Permit, discussed in detail in Section 3.8.3, *Regulatory Framework,* under "Clean Water Act"). The City of San Ramon Stormwater Program implements the City of San Ramon-specific components of the Contra Costa Clean Water Program (CCCWP), and includes two components: the Countywide Program and the San Ramon Stormwater Management Plan.[8] This includes implementation of a SWPPP with BMPs to control stormwater flows and water quality, as required for compliance with NPDES Permit No. CAS612008 issued by the San Francisco Bay Region Regional Water Quality Control Board (RWQCB) on behalf of the State Water Resources Control Board (SWRCB).[9]

As described in the CCCWP's *Contra Costa Watersheds Stormwater Resource Plan,*[10] runoff from watersheds in Contra Costa County carries pollutants associated with urban development, industrialization, agriculture, and atmospheric deposition to local water bodies including the San Francisco Bay and the Sacramento-San Joaquin Delta. Regional urbanization has led to the modification of natural watershed processes, resulting in stormwater arriving at creeks in greater volumes and more quickly than in unaltered watersheds. Increased runoff rates and volumes are capable of more effectively mobilizing and carrying pollutants to storm drainage networks and eventually to receiving waters; additionally, there is a strong relationship between urban watershed sediment yields and loading of contaminants to local water bodies, such as mercury, trace metals, PCBs, polycyclic aromatic hydrocarbons, and chlorinated pesticides.[11]

The SWRCB identifies water quality impaired water bodies on the Clean Water Act Section 303(d) List, as approved by the U.S. Environmental Protection Agency (USEPA).[12] No water bodies within the General Plan area are identified on the 303(d) List.[13]

[7] San Francisco Bay RWQCB. 2019. San Francisco Bay Basin (Region 2) Water Quality Control Plan. November 5. Available: https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html#basinplan (accessed October 19, 2022).
[8] San Ramon, City of. 2023. Stormwater. https://www.sanramon.ca.gov/our_city/departments_and_divisions/public_works/storm_drainage_water/stormwater (April 2023).
[9] SFBRWQCB. 2022. NPDES Permit Number CAS612008 issued by the SFBRWQCB. Available: https://www.cccleanwater.org/userfiles/kcfinder/files/Pleasant%20Hill%20AR%20FY%2020-21-Complete.pdf (accessed October 19, 2022).
[10] Contra Costa County. 2019. Contra Costa Watersheds Stormwater Resource Plan. January. https://www.cccleanwater.org/userfiles/kcfinder/files/SWRP%20Final%2020190124%20Part%201.pdf (April 2023).
[11] Ibid.
[12] SWRCB. 2021. 2018 California Integrated Report (Clean Water Act Section 303(d) List and 305(b) Report). https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report.html (April 2023).
[13] SWRCB. 2021. 2018 Integrated Report Map. https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=e2def63ccef54eedbee4ad726ab1552c (April 2023).

Groundwater Basin Hydrology

The California Department of Water Resources (DWR) defines the boundaries of groundwater basins throughout the State and assigns a priority designation for each, in accordance with the Sustainable Groundwater Management Act (SGMA), which is detailed in Section 3.8.3, *Regulatory Framework,* under "State." The priority designations guide management actions and requirements, which are reported to and enforceable by the California DWR. *California's Groundwater* (Bulletin 118) is the State's official publication on the occurrence and nature of groundwater throughout the State.

San Ramon Valley Groundwater Basin

The San Ramon Valley Groundwater Basin extends for approximately 7,120 acres (11 square miles) of surface area, and is classified by DWR as "Very Low Priority."[14] This basin is bounded by Stone Valley on the north, on the west by Las Trampas Ridge, on the east by the foothills of Mt Diablo, and on the south by the Livermore Valley Groundwater Basin. Sycamore Creek and San Ramon Creek are the principal streams flowing over it. Groundwater-bearing, alluvial deposits comprise the entire floor of San Ramon Valley and portions of the upland areas on all sides of the valley.[15]

Groundwater use is limited within the San Ramon Valley Groundwater Basin; local wells are used for small agricultural activities and landscape irrigation by individual landowners.[16] While there are slightly more than four hundred individual wells removing water from each basin, there have been no documented reports of permanent lowering of the water table.[17] Neither EBMUD nor DSRSD pump groundwater from the basin.[18]

No published data was found for water quality in the San Ramon Valley Groundwater Basin.[19]

Livermore Valley Groundwater Basin

The Livermore Valley Groundwater Basin extends for approximately 69,600 acres (109 square miles) of surface area. This basin extends from the Pleasonton Ridge east to the Altamont Hills (about 14 miles) and from the Livermore Upland north to the Orinda Upland (about 3 miles). Surface drainage features include Arroyo Valle, Arroyo Mocho, and Arroyo las Positas as principal streams, with Alamo Creek, South San Ramon Creek, and Tassajara Creek as minor streams. All streams converge on the west side over the basin to form Arroyo de la Laguna, which flows south and joins Alameda Creek in Sunol Valley.[20]

[14] DWR. 2020. Sustainable Groundwater Management Act 2019 Basin Prioritization. https://water.ca.gov/programs/groundwater-management/basin-prioritization (April 2023).
[15] DWR. 2004. California's Groundwater Bulletin 118. San Francisco Bay Hydrologic Region – San Ramon Valley Groundwater Basin. Updated February 27. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/2_007_SanRamonValley.pdf (April 2023).
[16] Contra Costa County. 2016. A Report By the 2015-2016 Contra Costa County Grand Jury. Report 1602 Protecting Our Groundwater Resources. May 10. https://www.cc-courts.org/civil/docs/grandjury/1602_GJ%20ReportFinalforPlenary_signed.pdf (April 2023).
[17] Ibid.
[18] San Ramon, City of. 2010. Draft Environmental Impact Report for the City of San Ramon General Plan 2030. April 5. https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_10826046/File/Our%20City/Departments/Community%20Development/Planning/General%20Plan/General%20Plan%202030/(2)%20San%20Ramon%20General%20Plan%202030%20EIR.pdf (April 2023).
[19] DWR. 2004. California's Groundwater Bulletin 118. San Francisco Bay Hydrologic Region – San Ramon Valley Groundwater Basin. Updated February 27. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/2_007_SanRamonValley.pdf (April 2023).
[20] DWR. 2006. California's Groundwater Bulletin 118. San Francisco Bay Hydrologic Region – Livermore Valley Groundwater Basin. Updated January 20. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/2_010_LivermoreValley.pdf (April 2023).

The Livermore Valley Groundwater Basin is classified by California DWR as "Medium Priority" for the purposes of SGMA Basin Prioritization.[21] The Zone 7 Water Agency is the designated Groundwater Sustainability Agency (GSA) for the Livermore Valley Groundwater Basin and has adopted an Alternative to a Groundwater Sustainability Plan (GSP), which was approved by the DWR in 2019.[22] The basin has operated within its sustainable yield over a period of at least 10 years.[23]

In the Livermore Valley Groundwater Basin, Zone 7 Water Agency administers oversight of the groundwater basins used for water supply and provides water to California Water Service Company, DSRSD, City of Livermore, and City of Pleasanton. Zone 7 Water Agency only withdraws groundwater that has been recharged using surface water supplies. Zone 7 Water Agency artificially recharges the Livermore Valley Groundwater Basin with local surface water supplies and State Water Project (SWP) water by releasing the surface waters into the Arroyo Mocho and Arroyo Valle; the infiltrated water is then pumped from the groundwater basin for various uses.[24]

General Plan Area

The General Plan area overlies two groundwater basins, the San Ramon Valley Groundwater Basin and the Livermore Valley Groundwater Basin, that are described above and portrayed in Figure 3.8-2.

Groundwater Water Quality

The General Plan area overlies the San Ramon Valley Groundwater Basin and the Livermore Valley Groundwater Basin. Figure 3.8-2, below, shows the extent of each groundwater basin within the General Plan area, which covers approximately 1,803 acres in the San Ramon Valley Groundwater Basin and approximately 2,607 acres in the Livermore Valley Groundwater Basin.

General Plan Area

No published data was found for water quality in the San Ramon Valley Groundwater Basin.

In the Livermore Valley Groundwater Basin, primary water quality constituents of concern include locally high concentrations of total dissolved solids (TDS), hardness, nitrate, organic compounds and naturally occurring boron and chromium. There are locally elevated levels of these constituents in this groundwater basin and management actions are being taken to address these water quality issues. The Zone 7 Agency conducts routine water quality sampling and monitoring to comply with the Del Valle water rights permits and Title 22 domestic Water Quality and Monitoring Regulations.[25]

[21] DWR. 2020. Sustainable Groundwater Management Act 2019 Basin Prioritization. https://water.ca.gov/programs/groundwater-management/basin-prioritization (April 2023).
[22] DWR. 2019. Sustainable Groundwater Management Program Alternative Assessment Staff Report. July 17. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/Alternatives/Files/10year/LivermoreValley/03_Livermore_Staff_Report.pdf (April 2023).
[24] Contra Costa County. 2016. A Report By the 2015-2016 Contra Costa County Grand Jury. Report 1602 Protecting Our Groundwater Resources. May 10. https://www.cc-courts.org/civil/docs/grandjury/1602_GJ%20ReportFinalforPlenary_signed.pdf (April 2023).
[24] Contra Costa County. 2016. A Report By the 2015-2016 Contra Costa County Grand Jury. Report 1602 Protecting Our Groundwater Resources. May 10. https://www.cc-courts.org/civil/docs/grandjury/1602_GJ%20ReportFinalforPlenary_signed.pdf (April 2023).
[25] Ibid.

Flood Hazard Areas

Contra Costa County

The Federal Emergency Management Agency (FEMA) National Flood Hazard Layer is a geospatial database that contains current effective flood hazard data. Special Flood Hazard Areas are defined to show the extent of flood waters that will occur in response to the magnitude flood that has a one percent chance of occurring in any given year; this is also commonly referred to as the 100-year floodplain or 100-year Flood Hazard Area. Such areas are also defined for the 500-year floodplain. FEMA has produced Flood Insurance Rate Maps (FIRMs) covering Contra Costa County, which define the 100-year Flood Hazard Areas for insurance purposes, and to guide land use planning to consider public and property safety as related to the potential for damage from flood events.

In addition to flooding which may occur in response to large storm events, flooding may also occur as a result of seismic events and/or infrastructure failure that results in the release of water from existing reservoirs (dam inundation), or inundation from a tsunami or seiche event. The DWR Division of Safety of Dams (DSOD) regulates dam safety and evaluates risks associated with potential for inundation resulting from dam failure. The State of California Office of Emergency Services (CalOES) has produced inundation maps and emergency plans covering various scenarios of dam failure, and Contra Costa County Department of Conservation and Development has created dam inundation maps for the County using CalOES data.[26]

General Plan Area

Figure 3.8-3, below, identifies FEMA-designated Flood Zones within the General Plan area. Portions of the 100- and 500-year floodplains are along existing San Ramon waterways, indicating areas that would be inundated by storms with likelihood of occurring once every 100 years and 500 years, respectively. Within San Ramon, portions of the 100-year floodplain are along San Ramon Creek, South San Ramon Creek, West Branch Alamo Creek, and Alamo Creek. Portions of the 500-year floodplain are along South San Ramon Creek, which is entirely modified for flood control purposes.[27]

San Ramon is located outside the tsunami hazard zone and is not subject to inundation by tsunami.[28] The City is not located in a coastal zone or near a large body of water where there would be risk of seiche. The nearest large body of water is the San Francisco Bay, located approximately 12.5 miles west of San Ramon. The nearest dam inundation area to San Ramon is associated with the Danville Dam, located approximately three miles northwest of San Ramon; however, the inundation area associated with failure of this dam is limited to areas adjacent to existing streets and stormwater drainage facilities within the Town of Danville.[29]

[26] Contra Costa County. 2018. Contra Costa County Hazard Mitigation Plan. Volume 1 – Planning Area-Wide Elements. January. Available: https://www.contracosta.ca.gov/DocumentCenter/View/48893/Contra-Costa-County-Draft-Local-Hazard-Mitigation-Plan-Volume-1-January-31-2018?bidId= (April 2023).
[27] FEMA. 2023. FEMA Flood Map Service Center. https://msc.fema.gov/portal/search?#searchresultsanchor (April 2023).
[28] DOC (California Department of Conservation). 2023. Contra Costa County Tsunami Hazard Areas. https://www.conservation.ca.gov/cgs/tsunami/maps/contra-costa (April 2023).
[29] DSOD. 2023. Dam Breach Inundation Map Web Publisher. https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2 (April 2023).

Figure 3.8-2 Groundwater Basins in General Plan Area

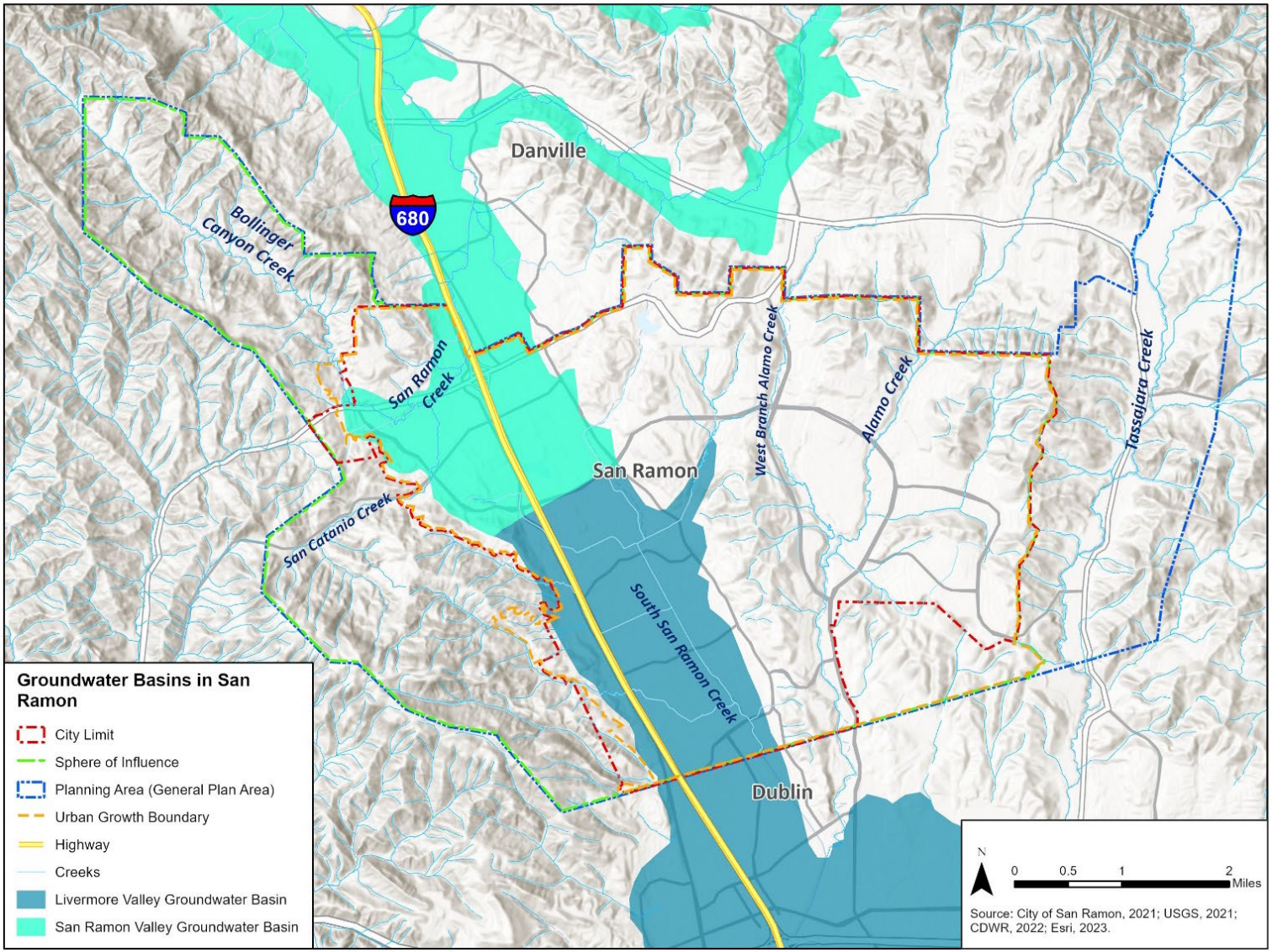
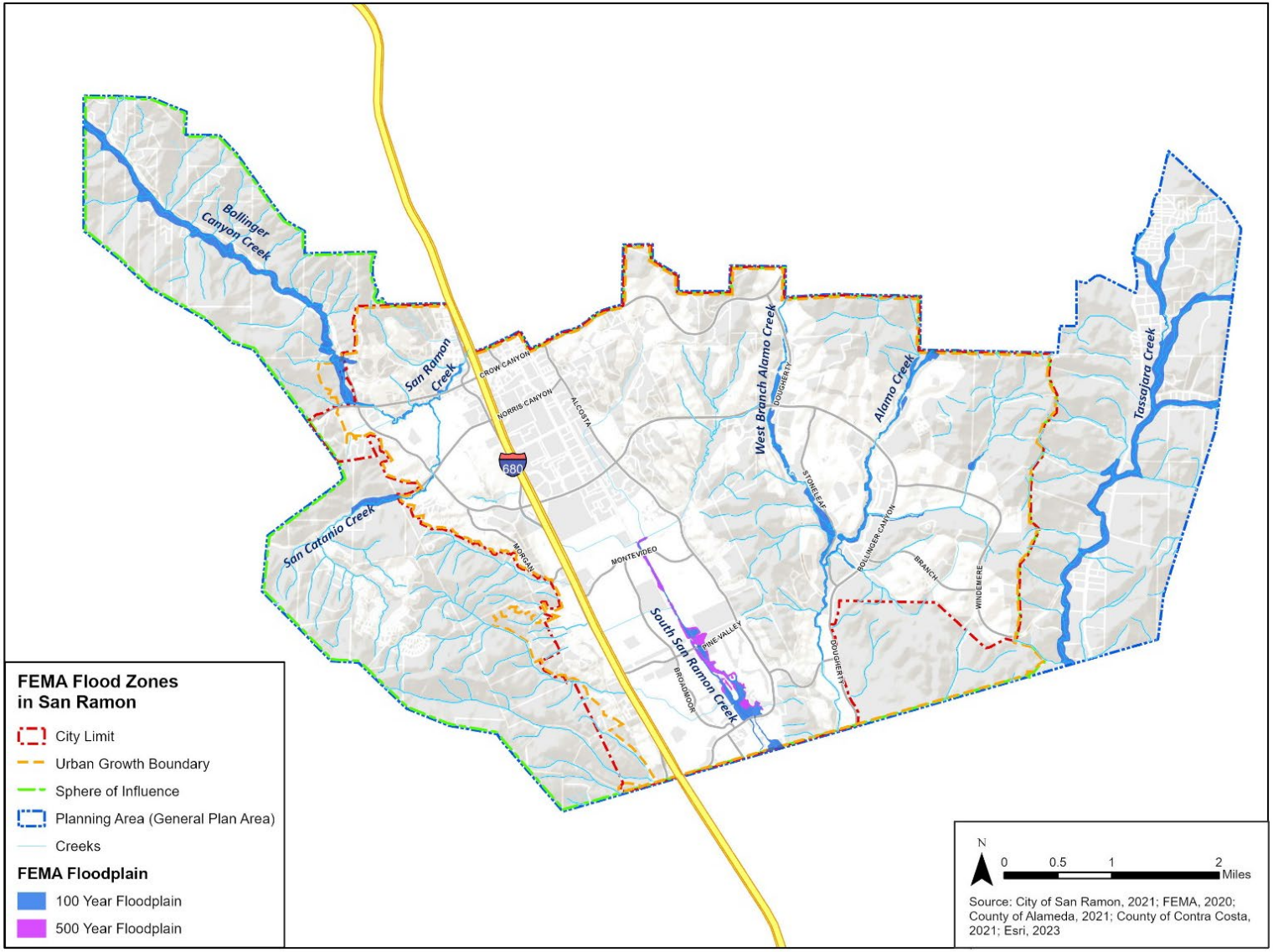


Figure 3.8-3 Flood Hazard Areas in General Plan Area



3.8.3 Regulatory Framework

Federal

Clean Water Act

The United States Army Corp of Engineers (USACE) regulates discharge of dredge or fill material into waters of the United States under Section 404 of the Clean Water Act (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 United States Code [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 state water quality standards.

The federal government also supports a policy of minimizing the destruction, loss, or degradation of wetlands. Executive Order 11990 (May 24, 1977) requires that each federal agency take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. The USACE regulates the discharge of dredged or fill material, including grading, placing of riprap for erosion control, pouring concrete, laying sod, and stockpiling excavated material. Activities that generally do not involve a regulated discharge, if performed specifically in a manner to avoid discharges, include driving pilings, drainage channel maintenance, temporary mining roads and farm/forest roads, and excavating without stockpiling.

In California, the term "waters of the United States," indicates resources that are subject to jurisdiction of the CWA as defined by the 2015 Clean Water Rule:

(1) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(2) All interstate waters, including interstate wetlands;

(3) The territorial seas;

(4) All impoundments of waters otherwise identified as waters of the United States under this section;

(5) All tributaries, of waters identified in paragraphs (1) through (3) of this section;

(6) All waters adjacent to a water identified in paragraphs (1) through (5) of this section, including wetlands, ponds, lakes, oxbows, impoundments, and similar waters;

(7) Western vernal pools, where they are determined, on a case-specific basis, to have a significant nexus to a water identified in paragraphs (1) through (3). Vernal pool identified in this paragraph shall not be combined with waters identified in paragraph (6) when performing a significant nexus analysis. If waters identified in this paragraph are also an adjacent water under paragraph (6), they are an adjacent water and no case-specific significant nexus analysis is required.

SECTION 404—DISCHARGE OF DREDGE AND FILL OF WATERS OF THE UNITED STATES PERMIT

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 an Individual Section 404 Permit.

Wetlands are a subset of waters of the United States and receive protection under Section 404 of the CWA. The federal definition of wetlands is the following:

> *Wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.*

The 404(b)(1) Guidelines regarding the implantation of Section 404 of the CWA mandate that filling wetlands be avoided unless it can be demonstrated that the project is the least environmentally damaging practicable alternative. The USACE has primary federal responsibility for administering regulations that concern waters and wetlands.

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 Total Maximum Daily Load (TMDL). A TMDL is a calculation of the total maximum daily load (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 Municipal Separate Storm Sewer Systems (MS4s) and wastewater treatment plants. For stormwater, load reductions would be required to meet the TMDL waste load allocations within the 20 years required by the TMDLs.

The USEPA, SWRCB, and RWQCBs 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 has adopted TMDLs that apply to the City San Ramon.

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 certification from the appropriate

agency stating that the discharge is consistent with the State's water quality standards and criteria. In California, the SWRCB delegates authority to the RWQCBs, to grant water quality certification or waive the requirements. San Ramon is located within the San Francisco Bay RWQCB jurisdiction.

SECTION 402—NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM PERMIT

The RWQCBs administer the NPDES stormwater permitting program, under Section 402(d) of the federal CWA, on behalf of the USEPA. 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, the California Toxics Rule, and the Basin Plan.

National Flood Insurance Program

FEMA oversees floodplains and administers the National Flood Insurance Program (NFIP) under the National Flood Insurance Act of 1968. The NFIP makes federally subsidized flood insurance available to property owners within communities who participate in the program. FEMA defines areas of special flood hazard, or "Flood Hazard Areas," as those areas that are subject to inundation by a 100-year flood event, or the magnitude flood with a one percent chance to occur in any given year, or approximately once every 100 years. These areas are also defined for the 500-year flood event. Flood Hazard Areas are defined on regulatory flood maps titled Flood Insurance Rate Maps (FIRMs). The NFIP mandates that development cannot occur within a Flood Hazard Area if it would result in more than a one-foot increase in flood elevation. New development is not allowed to be located within delineated Flood Hazard Areas unless a map revision to the respective FIRM(s) is conducted, based upon flood control facilities or other improvements that would result in the specified location no longer being subject to inundation by a regulatory flood.

National Pollutant Discharge Elimination Program

Pursuant to Section 402 of the CWA and the Porter-Cologne Water Quality Control Act, municipal stormwater discharges are regulated by the SWRCB by the nine RWQCBs. The City of San Ramon is within the San Francisco Bay RWQCB jurisdiction and subject to the San Francisco Bay Region Municipal Regional Stormwater Issuing Waste Discharge Requirements and NPDES Permit, Order No. R2-2015-0049, NPDES Permit No. CAS612008, adopted October 14, 2009, and revised November 19, 2015.

NPDES Provision C.3 addresses post-construction stormwater management requirements for new development and redevelopment projects that add and/or replace 10,000 square feet or more of impervious area.[30] Provision C.3 requires the incorporation of site design, source control, and stormwater treatment measures into development projects in order to minimize the discharge of pollutants in stormwater runoff and non-stormwater discharges and to prevent increases in runoff

[30] Contra Costa County. 2022. Contra Costa Clean Water Program – Stormwater C.3 Guidebook, 8th Edition. Stormwater Quality Requirements for Development Applications. December 23. https://www.cccleanwater.org/userfiles/kcfinder/files/2022_1223_HAI_StormwaterGuidebook_8th_Edition_FINAL%281%29.pdf (April 2023).

flows. Low Impact Development (LID) methods are to be the primary mechanism for implementing such controls.

NPDES Provision C.3(g) pertains to hydromodification management requirements. This NPDES Permit provision requires five Control Design Criteria to be implemented: range of flows to control, goodness of fit criteria, allowable low flow rate, standard hydromodification modeling, and alternate hydromodification modeling and design. As noted above, projects disturbing more than one acre of land during construction are required to comply with the NPDES Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No. CAS000002 (Construction General Permit). The RWQCB regulates Construction General Permit activities at a local level.

To obtain coverage under the Construction General Permit, a project applicant must provide a Notice of Intent, a Stormwater Pollution Protection Plan (SWPPP), and other documents required by Attachment B of the Construction General Permit. Activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as grubbing or excavation. This permit also covers linear underground and overhead projects such as pipeline installations.

The Construction General Permit uses a risk-based permitting approach and mandates certain requirements based on the project risk level (Level 1, Level 2, or Level 3). The project risk level is based on the risk of sediment discharge and the receiving water risk. The sediment discharge risk depends on project location and timing (such as wet season versus dry season activities). The receiving water risk depends on whether the project would discharge to sediment-sensitive receiving water. The determination of the project risk level would be made by project applicants when the Notice of Intent is filed (and more details of the ultimate timing of the construction activity are confirmed).

The performance standard in the Construction General Permit is that dischargers minimize or prevent pollutants in stormwater discharges and authorized non-stormwater discharges through the use of controls, structures, and BMPs. A SWPPP must be prepared by a qualified SWPPP developer that meets the certification requirements in the Construction General Permit. The purpose of the SWPPP is (1) to help identify the sources of sediment and other pollutants that could affect the quality of stormwater discharges, and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater as well as non-stormwater discharges resulting from construction activity. Operation of BMPs must be overseen by a qualified SWPPP practitioner who meets the requirements outlined in the permit.

National Toxics Rule and California Toxics Rule

In 1992, the USEPA promulgated the National Toxics Rule 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 National Toxics Rule established water quality standards for 42 pollutants not covered under California's Statewide water quality regulations at that time. As a result of the court-ordered revocation of California's Statewide basin plans in September 1994, the USEPA initiated efforts to promulgate additional federal water quality standards for California. In May 2000, the USEPA issued the California Toxics Rule, which includes all the priority pollutants for which the USEPA has issued numeric criteria not included in the National Toxics Rule.

Federal 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 practicable alternative. Title 23 of the Code of Federal Regulations 650, Subpart A, "Location and Hydraulic Design of Encroachment on Floodplains" specifies applicable floodplain regulations.

FEMA also administers the NFIP, a federal program that 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.

State

Porter-Cologne Water Quality Control Act

The State of California is authorized to administer federal or State laws regulating water pollution within the State. The Porter-Cologne Water Quality Control Act ("Porter-Cologne"), contained within the California Water Code §13000, et seq., includes provisions to address requirements of the CWA. These provisions include NPDES permitting, dredge and fill programs, and civil and administrative penalties. Porter-Cologne is broad in scope and addresses issues relating to the conservation, control, and utilization of the water resources of the State. Additionally, it states that the quality of all the waters of the State, including groundwater and surface water, must be protected for the use and enjoyment by the people of the State.

Historically, California relied on its authority under Section 401 of the CWA (see description above) to regulate discharges of dredged or fill material to waters of the United States. Section 401 requires an applicant to obtain "water quality certification" from the SWRCB through its 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 materials (CWA § 404 permits) issued by the USACE. The RWQCB has typically waived WDRs under Porter-Cologne for projects or plans that also required Section 401 certification. Following the U.S. Supreme Court's decision *Rapanos v. United States*, 547 U.S. 715 (2006) which limited the jurisdiction of wetlands under the CWA, the RWQCBs now generally rely on the report of waste discharge process to regulate discharges into waters of the State.

California Code of Regulations (Wetlands and Waters Definition)

The SWRCB 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 with regard to the issuance of water quality certifications. Generally, an area is a wetland if, under normal circumstances:

(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.

Under California State law, waters of the State means "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 SWRCB released a legal memorandum confirming the State's jurisdiction over isolated wetlands. The memorandum stated that under Porter-Cologne, discharges to wetlands and other waters of the State are subject to State regulation, and this includes isolated wetlands. In general, the SWRCB regulates discharges to isolated waters in much the same way as it does for waters of the United States, using Porter-Cologne rather than CWA authority.

California Model Water Efficient Landscape Ordinance

The Model Water Efficient Landscape Ordinance (MWELO), also referenced by Title 24, Part 11, Chapters 4 and 5 CalGreen Building Code, requires that all local agencies adopt, implement, and enforce the MWELO or a local Water Efficient Landscape Ordinance (WELO) that is at least as effective as the MWELO. The purpose of water efficient landscape ordinances is to not only increase water efficiency but to improve environmental conditions in the built environment. Landscaping should be valued beyond the esthetic because landscapes replace habitat lost to development and provide many other related benefits such as improvements to public health and quality of life, climate change mitigation, energy and materials conservation and increased property values.[31]

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.

California NPDES Stormwater Permit

In November 1990, the USEPA 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."

Provision C.3 in the Municipal Regional Permit requires site designs for new developments and redevelopments to minimize the area of new roofs and paving and treat runoff, and in some cases, control the rates and durations of site runoff. Where feasible, pervious surfaces should be used instead of paving so that runoff can infiltrate to the underlying soil. Runoff should be dispersed to landscaping where possible. Remaining runoff from impervious areas must be treated using bioretention. In some developments, the rates and durations of site runoff must also be controlled.

[31] DWR. 2023. Model Water Efficient Landscape Ordinance. https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Model-Water-Efficient-Landscape-Ordinance (April 2023).

The C.3 requirements are separate from, and in addition to, requirements for erosion and sediment control and for pollution prevention measures during construction. In addition, project applicants must execute agreements to allow municipalities to verify that stormwater treatment and flow-control facilities that are approved as part of new development are maintained in perpetuity.

California Toxics Rule and State Implementation Policy

The California Toxics Rule, presented in 2000 in response to requirements of USEPA's National Toxics Rule, establishes numeric water quality criteria for approximately 130 priority pollutant trace metals and organic compounds. The California Toxics Rule 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 California Toxics Rule 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 SWRCB in 2000. It establishes provisions for translating the California Toxics Rule criteria, National Toxics Rule 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.

California Sustainable Groundwater Management Act

In September 2014, California Governor Jerry Brown signed SGMA into law, requiring that California's critical groundwater resources be sustainably managed by local agencies. As introduced in Section 3.8.2, *Environmental Setting,* under "Groundwater Resources," SGMA gives local agencies the power to sustainably manage groundwater and requires GSPs to be developed for Medium- and High-Priority groundwater basins, as defined by the DWR. As discussed above in Section 3.8.2, *Environmental Setting,* under "Groundwater Basin Hydrology," the San Ramon Valley Groundwater Basin is designated by DWR as Very Low Priority and therefore does not require a GSP, and the Livermore Valley Groundwater Basin, which is designated by DWR as Medium Priority, is managed by a DWR-approved GSA under an Alternative GSP (the "Livermore Valley Alternative") for compliance with SGMA.

California Urban Water Management Act

The California Urban Water Management Planning Act (UWMP Act), enacted by California Water Code (CWC) Section 10620, requires all urban water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 AFY to maintain an UWMP. Both water supply providers within the Planning Area, including EBMUD and DSRSD, each maintain a current (2020) UWMP. In accordance with the UWMP Act, both UWMPs identify and characterize

the respective agency's planning activities to ensure adequate water supplies to meet existing and future demands for water within its service territory, and outline contingency planning steps to execute during times of actual or anticipated water supply shortages.

The 2020 UWMP for EBMUD[32] and DSRSD[33], respectively, each include data and projections for water supply and demand, conservation programs, water demand management measures and BMPs, and recycled water opportunities through the year 2045. They also address requirements of the Water Conservation Bill of 2009 (Senate Bill (SB) X7-7) through per capita water use reduction targets, as well as Assembly Bill (AB) 1668 and SB 606, through inclusion of a Drought Risk Assessment and Water Shortage Contingency Plan.

Regional

San Francisco Bay Regional Water Quality Control Plan

San Ramon is within the jurisdiction of the San Francisco Bay RWQCB, which is Region 2 of the nine Regional Boards operating throughout the State, under the SWRCB. The San Francisco Bay RWQCB protects and restores surface and groundwater for the benefit of the people of California by regulating discharges from industrial, commercial, municipal, agricultural, and other sources and by developing and overseeing water quality programs and policies.[34]

All activities within the RWQCB's jurisdiction are subject to the management direction of Basin Plan, a master policy document for managing water quality in the region. The Basin Plan establishes beneficial water uses for waterways and water bodies within the region. The Basin Plan is updated every three years, with public input, and with consideration to what updates are needed to address new or changing water quality issues; under this Triennial Review process, the San Francisco Bay Basin Plan and was last updated in 2021.[35]

Contra Costa Clean Water Program

The CCCWP (introduced in Section 3.8.2, *Environmental Setting,* under "Surface Water Quality") is implemented by the County to assist municipalities in complying with NPDES requirements. The CCCWP works to protect local creeks, reservoirs, watersheds, and San Francisco Bay from contamination and pollution required by federal and State clean water regulations.

San Francisco Bay Region Municipal Stormwater Permitting Program

The San Francisco Bay Region Municipal Stormwater NPDES Permit, Order No. R2-2015-0049 (MRP) issues the Waste Discharge Requirements and NPDES Permit for the discharge of stormwater runoff from the MS4s of over 70 municipalities, including San Ramon, and local agencies in five Bay Area counties.[36] Under the MRP, permittees are prohibited from non-stormwater discharges into storm drain systems and watercourses. Permitted discharges must not cause or contribute to a violation of

[32] EBMUD. 2021. Urban Water Management Plan 2020. https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan (April 2023).
[33] DSRSD. 2021. 2020 Urban Water Management Plan. June. https://www.dsrsd.com/home/showpublisheddocument/7749/637607511715070000 (April 2023).
[34] San Francisco Bay RWQCB. 2023. San Francisco Bay Regional Water Quality Control Board – Strategic Workplan. March. https://www.waterboards.ca.gov/sanfranciscobay/board_info/Region_2_2023_Strategic_Workplan.pdf (April 2023).
[35] Ibid.
[36] SWRCB. 2015. San Francisco Bay Region Municipal Regional Stormwater NPDES Permit. November 15. Order No. R2-2015-0049, NPDES Permit No. CAS612008. https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/Municipal/R2_2015_0049_amended.pdf (April 2023).

any applicable water quality standard for receiving waters. Upon a determination by either the MRP permittee(s) or the RWQCB that discharges are causing or contributing to an exceedance of an applicable water quality standards, the permittee(s) must notify, within no more than 30 days, and thereafter submit a report to the RWQCB. The report must describe controls or BMPs that are currently being implemented, and the current level of implementation, and additional controls or BMPs that will be implemented, and/or an increased level of implementation, to prevent or reduce the discharge of pollutants that are causing or contributing to the exceedance of water quality standards. The MRP also sets forth requirements for monitoring water quality. Provision C.3 of the MRP establishes discharge requirements for new development and redevelopment projects, towards the goal of providing source control, site design, and stormwater treatment measures, which primarily occur through LID techniques.

Local

San Ramon General Plan

The current 2035 General Plan contains policies related to hydrology and water quality, but they would be replaced by the proposed 2040 General Plan.

San Ramon Municipal Code

The San Ramon Municipal Code (SRMC) sets forth a code of ordinances associated with hydrology and water quality. Title B – Regulations, Division B6 – Health, Sanitation and Environmental Quality, Chapter XII – Stormwater Management and Discharge Control, of the SRMC details measures to prevent and reduce flood damage as well as standards for construction, utilities, subdivisions, and homes. In addition, the City of San Ramon is responsible for ensuring that creeks and drainage channels, including those on private property, are sufficiently maintained and clear of debris.

San Ramon Flood Control Program

The City of San Ramon is a permittee under the Phase II NPDES Municipal Stormwater Permit. Compliance with NPDES requirements is facilitated by the City of San Ramon Stormwater Program, which encourages new development and significant redevelopment project site designs to minimize the area of new roofs, pavement, and other impervious surfaces; where feasible, pervious surfaces should be implemented so that stormwater runoff can percolate to the underlying soil, and stormwater runoff from impervious areas must be captured and treated before draining into San Ramon's stormwater system and eventually into the San Francisco Bay.[37]

3.8.4 Impacts and Mitigation Measures

Significance Criteria

The City of San Ramon utilizes the following 2022 *CEQA Guidelines* Appendix G significance criteria questions related to hydrology and water quality.

Would the 2040 General Plan:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

[37] San Ramon, City of. 2023. Stormwater. https://www.sanramon.ca.gov/our_city/departments_and_divisions/public_works/storm_drainage_water/stormwater (April 2023).

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the 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 a 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 offsite?

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?

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?

Approach to Analysis

Hydrology and Water Quality

This analysis identifies and characterizes potential physical environmental impacts that could affect topics related to hydrology and water quality based upon consideration of the difference between existing (2022) development in San Ramon to the projected future (2040) development in San Ramon based upon buildout of the 2040 General Plan. This includes consideration of how the addition of up to 10,115 net new residential units and up to 347,339 net new gross square feet of non-residential floor space could affect topics including water quality (surface and groundwater), groundwater supply and recharge, alteration of drainage patterns, potential for erosion/siltation and flooding, exceedance of existing stormwater drainage facilities, impedance or redirection of flood flows, risk of pollutant release due to inundation, and the implementation of plans to control for water quality and sustainable groundwater conditions. Water quality conditions are compared with water quality standards and WDRs by identifying potential contaminants and pollution pathways, amount of impervious area, and runoff treatment requirements. Finally, as part of the analysis, inundation and flooding are assessed by reviewing potential inundation zone maps and data relative to development that would be facilitated by the proposed plan.

Impact characterizations were informed through review of information regarding regional and local hydrology, climate, topography, and geology contained in the San Ramon 2035 General Plan and associated EIR, as well as other resources including the San Francisco Bay RWQCB Basin Plan, FEMA FIRMs, the proposed 2040 General Plan, and plan-specific features and proposals. This analysis also addresses policies of the 2040 General Plan related to hydrology and water quality. Topics not covered in the following impact analysis include water supply availability and adequacy of wastewater conveyance and treatment infrastructure, which are discussed in Section 3.13, *Utilities and Service Systems*. In addition, impacts related to wetlands and waters of the United States are discussed in Section 3.3, *Biological, Agriculture, and Forestry Resources*.

EIR Scoping Comments Consideration

This section also addresses the following comments received in response to the EIR NOP.

- Watersheds are discussed in Section 3.8.2, *Environmental Setting,* under "Surface Water Hydrology and Drainage" and under Impact HYD-3.
- Existing storm drain systems and associated facilities are discussed in Section 3.8.2, *Environmental Setting,* under "Surface Water Hydrology and Drainage" and under Impacts HYD-3 and HYD-4.
- Flood Hazard Areas are discussed in Section 3.8.2, *Environmental Setting,* under "Flood Hazard Areas" and under Impact HYD-4.
- Compliance with the current NPDES requirements under the City's Stormwater Management and Discharge Control Ordinances and the C.3 Guidebook is discussed in Section 3.8.3, *Regulatory Framework*, in Section 3.8.3, *Environmental Setting,* under "Surface Water Hydrology and Drainage," and under Impacts HYD-1, HYD-3, and HYD-5.
- The potential for release of hazardous wastes/substances is addressed under Impacts HYD-1 and HYD-5.
- Water supply is addressed in Section 3.13, *Utilities and Service Systems*, while groundwater resources are addressed in Section 3.8.2, *Environmental Setting,* under "Groundwater Basin Hydrology" and under Impact HYD-2.
- Water quality regulations including the Clean Water Act and NPDES program are presented in Section 3.8.3, Regulatory Framework, and addressed under Impact HYD-1.
- Landscape water use efficiency is addressed in Section 3.8.3, and under Impact HYD-2. Groundwater quality is addressed under Impact HYD-1.
- Stormwater runoff and drainage, and the 50-Year Plan of the Contra Costa County Flood Control and Water Conservation District and the City Public Works Department are discussed in Section 3.8.2, Environmental Setting, under "Surface Water Hydrology," as well as under Impact HYD-2 and Impact HYD-3.

Specific Thresholds of Significance

For the purposes of this analysis, the thresholds below are used to evaluate the significance of hydrology and water quality impacts resulting from implementation of the 2040 General Plan.

- Violate any water quality standards or waste discharge requirements established by a regulatory body with jurisdiction over the General Plan area.
- Deplete groundwater supplies or interfere with groundwater recharge such that the proposed plan would impede or obstruct goals and policies of a groundwater management plan.
- Alter an existing drainage pattern through alteration of the course of a stream or river or increased impervious surfaces and resulting in erosion, siltation, or flooding on or off-site.
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Expose people to pollutants due to inundation related to flooding, tsunami, or seiche.
- Conflict with a water quality control plan or sustainable groundwater management plan such goals would be obstructed.

Impact Evaluation

Water Quality (Surface and Groundwater)

Significance Criterion a:	Would the proposed plan violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Impact HYD-1 IMPLEMENTATION OF THE 2040 GENERAL PLAN WOULD INVOLVE GROUND-DISTURBING ACTIVITIES DURING CONSTRUCTION THAT COULD TEMPORARILY INCREASE THE POTENTIAL FOR WATER QUALITY TO BE AFFECTED BY SEDIMENTATION OR AN ACCIDENTAL SPILL OR RELEASE OF HAZARDOUS MATERIALS. HOWEVER, WITH ADHERENCE TO APPLICABLE WATER QUALITY STANDARDS, WASTE DISCHARGE REQUIREMENTS, AND PROPOSED GENERAL PLAN POLICIES, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Construction activities would involve ground-disturbing activities, which includes the use of heavy equipment and machinery that could increase the potential for water quality degradation to occur as a result of soil erosion or sedimentation, or an accidental spill or release of hazardous materials such as oils, fuels, paints, and solvents. Buildout of the 2040 General Plan would emphasize infill and reuse, due to the existing built-up nature of the General Plan area; therefore, construction activities may involve demolition of existing structures, and earth-moving activities to install appropriate foundations, structures, utilities, and associated facilities. Earth-moving activities during construction could include excavation and trenching, soil compaction and moving, cut and fill activities, and grading. These activities would have a greater potential to impact water quality in non-urbanized areas (if development is conducted through continued annexation of unincorporated areas) due to the ground cover being more commonly characterized by natural and permeable surfaces than in urbanized areas, where ground cover is previously development and more commonly covered with pavement and other impervious surfaces. However, whether development is conducted through annexation or infill, ground-disturbing activities would be subject to the NPDES Construction General Permit and SRMC requirements, both of which require site-specific BMPs to minimize or avoid the potential for ground disturbance to result in water quality impacts.

The City of San Ramon is a permittee under the Phase II NPDES Municipal Stormwater Permit. In accordance with the NPDES permit, operators of a construction site would be responsible for preparing and implementing a SWPPP that would outline project-specific BMPs to control erosion, sediment release, and otherwise reduce the potential for discharge of pollutants into the stormwater drainage system. The SWPPP would also require post-construction BMPs, such as but not limited to covering stockpiled soils, installing silt fences and erosion control blankets, and handling and disposing of wastes properly.

Section B6-364 of the San Ramon Municipal Code also requires future development subject to the City's NPDES permit to comply with the most recent version of the *Contra Costa Clean Water Program Stormwater C.3. Guidebook*, including LID techniques for the reduction and treatment of stormwater runoff. Pursuant to Provision C.3. requirements, all new development and significant redevelopment that creates or replaces 10,000 square feet or more of impervious surfaces must treat stormwater runoff on-site. Additionally, projects between 2,500 and 10,000 square feet requiring approvals or permits (including single-family residences) would be required to prepare and

submit a Stormwater Control Plan for a Small Land Development Project and implement one of four options provided in the Guidebook to reduce the amount of stormwater runoff.[38]

In addition, the 2040 General Plan includes the following Open Space and Conservation Element guiding policies and implementing policies that would minimize or avoid potential impacts associated with water quality during construction activities:

Guiding Policy 8.1-G-1: Protect and maintain the quality of biological resources in the San Ramon city limits, while also balancing the needs of growth and development.

Policy 8.1-I-5 Require erosion control plans for proposed new development that require significant grading or are near streams, wetlands, and riparian areas. The plans shall include recommendations for grading practices that prevent erosion, loss of topsoil, and scour of drainageways, consistent with biological and aesthetic values.

Guiding Policy 8.3-G-1: Acquire, preserve, and maintain open space and its natural resources for future generations.

Policy 8.3-I-9 Consider alternatives to culverting or channelization of waterways during all stages of the review process.

Policy 8.3-I-11 Continue participation in the Contra Costa Clean Water Program to control stormwater pollution and protect the quality of the City's waterways.

Policy 8.3-I-12 Monitor the condition of waterways within the city limits and take proactive measures to prevent degradation.

Policy 8.1-I-5 reinforces compliance with regulatory requirements and the CCCWP, discussed above, by requiring the implementation of erosion control plans and measures during construction to prevent erosion and associated effects such as sedimentation. Policy 8.3-I-9 encourages the use of construction methods that do not involve culverting or channelization of waterways, which are both methods of conducting construction around existing waterways that involve substantial ground disturbance and can result in substantial alteration to the alignment of the waterway; by encouraging alternative methods of construction, the potential for water quality impacts would be avoided or minimized. Policy 8.3-11 and Policy 8.3-12 are also proactive measures to minimize or avoid potential impacts to water quality during construction activities, by controlling for stormwater pollution and by preventing degradation, respectively. With implementation of these 2040 General Plan policies and regionally consistent BMPs for water quality and NPDES compliance, construction would be consistent with water quality standards and waste discharge requirements. Therefore, the 2040 General Plan construction impacts related to surface water quality and groundwater quality would be less than significant.

Operation

Operation and maintenance of development facilitated by the 2040 General Plan would not involve the ground-disturbing activities or use of heavy construction equipment and machinery that introduce potential for an accidental spill or release of hazardous materials to occur, or erosion and

[38] Contra Costa County. 2022. Contra Costa Clean Water Program – Stormwater C.3 Guidebook, 8th Edition. Stormwater Quality Requirements for Development Applications. December 23. https://www.cccleanwater.org/userfiles/kcfinder/files/2022_1223_HAI_StormwaterGuidebook_8th_Edition_FINAL%281%29.pdf (April 2023).

sedimentation associated with disturbed soils; as such, the potential for associated water quality impacts to occur would be largely limited to the construction period for individual projects. During operation of development facilitated by the 2040 General Plan, compliance with the City of San Ramon-specific components of the CCCWP, including the implementation of post-construction stormwater control measures, would minimize or avoid potential water quality impacts.

Future development would also be required to comply with stormwater requirements as detailed in Section B6-364 and C7-67 of the SRMC, Provision C.3. requirements outlined in the most recent version of the Contra Costa Clean Water Program Stormwater C.3. Guidebook, as well as other regulations and guidelines established by federal, State, and local agencies.

The implementation of LID features as part of both new development and retrofitting existing development, as applicable under the 2040 General Plan, could result in increased stormwater infiltration compared to existing conditions and, thus, enhance water quality by minimizing the conveyance of contaminants in stormwater. It would also be in alignment with the County Flood Control and Water Conservation District's 50-Year Plan, which encourages local communities to plan for modifying flood control channels to incorporate natural features.[39]

In addition, the 2040 General Plan includes the following Open Space and Conservation Element guiding policies and implementing policies that would help minimize or avoid potential impacts associated with water quality during operational activities:

Guiding Policy 8.3-G-1: Acquire, preserve, and maintain open space and its natural resources for future generations.

Policy 8.3-I-2 Enhance San Ramon's creeks and riparian corridors by requiring preservation or replacement of riparian vegetation, as appropriate and in conformity with regulatory requirements.

Policy 8.3-I-3 Explore opportunities to preserve significant creek, riparian areas, sensitive natural communities, and prominent topographic features as open space.

Policy 8.3-I-10 Promote maintenance and protection of waterways through the use of Geologic Hazard Abatement District(s), conservation easements, endowments, special assessments, or other appropriate mechanisms.

Guiding Policy 8.6-G-1: Promote the implementation of water quality and conservation programs and measures by San Ramon employers, residents, and public agencies.

Policy 8.6-I-6 Continue implementation of the City of San Ramon Stormwater Management Program to reduce storm water pollution, provide public education, and to protect the water quality of the City's local creeks and streams. Promote the reduction of storm water pollution through the construction and maintenance of joint treatment facilities and other partnerships between the City and private property owners.

Policy 8.6-I-7 Promote the protection of groundwater resources by collaborating with agencies that monitor and oversee clean-up efforts at existing sources of pollution.

[39] Contra Costa County. 2009. The 50 Year Plan "From Channels to Creeks". Flood Control and Water Conservation District. March 31. https://www.contracosta.ca.gov/DocumentCenter/View/6853/50---Year-Plan-3-20-09-BOS-compressed-PDF?bidId= (April 2023).

Policy 8.3-I-2 would preserve or replace riparian vegetation, which would minimize or avoid the potential to impact beneficial uses or associated water quality standards of existing waterways. Similarly, Policy 8.3-I-3 and Policy 8.3-I-10 would also encourage the protection of existing waterways, thereby minimizing or avoiding the potential for beneficial use degradation and associated violation of water quality standards to occur. Policy 8.6-I-6 further reinforces compliance with regulatory requirements, as well as implementation of the City of San Ramon Stormwater Management Program to reduce or avoid stormwater pollution during maintenance activities. Policy 8.6-I-7 applies similar requirements for groundwater resources, by encouraging agency collaboration during pollution clean-up efforts. With implementation of these 2040 General Plan policies and regionally consistent BMPs for water quality and NPDES compliance, operation would be consistent with water quality standards and waste discharge requirements. Therefore, the 2040 General Plan operational impacts related to surface water quality and groundwater quality would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Groundwater Supply and Recharge

Significance Criterion b:	Would the proposed plan substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Impact HYD-2 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD NOT PUMP WATER FROM THE LOCAL GROUNDWATER BASIN AND WOULD NOT INTRODUCE SUBSTANTIAL NEW AREAS OF IMPERMEABLE SURFACES SUCH THAT THE RATES OR PATTERNS OF GROUNDWATER RECHARGE FROM INFILTRATION WOULD BE AFFECTED. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Water supply required to support construction activities would be provided by EBMUD or DSRSD and would not be pumped directly from the local groundwater basins; no impact to groundwater would occur as a result of direct consumption during construction. During construction of individual future projects facilitated by the 2040 General Plan, ground-disturbing activities could temporarily alter site-specific drainage patterns; BMPs would be implemented through the SWPPP required for compliance with the Clean Water Act and the CCCWP. Construction-related impacts would be temporary and site-specific, such as through site preparation activities, the use of staging and laydown areas, and the placement of new or revised infrastructure. However, such activities would be limited to individual future projects' construction periods and would not substantially alter the rates or patterns of groundwater recharge from infiltration. Therefore, construction-related impacts related to groundwater supply and recharge would be less than significant.

Operation

Section 3.13, *Utilities and Service Systems,* provides discussion of water supply availability and reliability. Development facilitated by the 2040 General Plan would receive water supply from either

EBMUD or DSRSD and would not install groundwater supply wells or conduct on-side groundwater pumping to meet water demands. EBMUD does not produce water supply from the San Ramon Valley Groundwater Basin or the Livermore Valley Groundwater Basin. DSRSD is authorized to produce a limited amount of groundwater from the Livermore Valley Groundwater Basin; however, water supply provided by DSRSD is almost entirely obtained from the Zone 7 Water Agency, which is a wholesale water supplier as well as the DWR-approved GSA for the Livermore Valley Groundwater Basin and responsible managing and maintaining sustainable supply conditions within the basin. Therefore, development facilitated by the 2040 General Plan would not affect groundwater through direct consumption, and potential operational groundwater impacts would be limited to indirect means such as through alteration of infiltration and recharge.

The General Plan area is primarily built-up, and development would be focused on infill within previously disturbed areas, and reuse of existing development. Previously undisturbed areas would not be affected by the proposed plan. The San Ramon Valley Groundwater Basin and Livermore Valley Groundwater Basin are 7,120 acres and 69,600 acres in size, respectively; site-specific changes to infiltration rates would not affect overall groundwater recharge or supply. In addition, the San Ramon Municipal Code and Contra Costa Clean Water Program encourage the use of LID features and explicitly aim to increase areas of permeable surfaces, which would facilitate increased stormwater retention and infiltration to the subsurface.

The 2040 General Plan includes the following Traffic and Circulation Element policy, which would help minimize or avoid the potential for new impervious surfaces to indirectly affect groundwater recharge:

Guiding Policy 5.6-G-2: Encourage trip reduction measures in an effort to reduce vehicle-miles-traveled, improve air quality, and reduce greenhouse gas emissions.

> **Policy 5.6-I-18** Encourage shared parking facilities and parking reductions for compatible land uses to minimize excessive parking to reduce inefficient use of land, unnecessary pavement and stormwater runoff, and encourage alternative transportation and reductions in vehicle-miles-traveled.

Policy 5.6-I-18 would minimize the extent of new paved areas associated with parking facilities and possibly reduce the extent of existing paved parking areas. This would minimize potential disruptions to groundwater infiltration associated with impermeable ground surfaces. Also, while development facilitated by the 2040 General Plan could increase impervious surfaces throughout the General Plan area, LID features associated with development would minimize potential to increase impervious surfaces and adversely affect infiltration and runoff; such features may include bioretention systems, swales, green roofs, infiltration systems, and permeable pavers. This would in turn facilitate infiltration of surface water to the subsurface and help filter contaminants out of surface runoff as it infiltrates soil to underlying groundwater resources. Therefore, operational impacts related to groundwater supply and recharge would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Drainage Pattern Alteration

Significance Criterion c:	Would the proposed plan substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: 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?

Impact HYD-3 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD NOT ALTER THE COURSE OF A STREAM OR RIVER OR SUBSTANTIALLY ALTER EXISTING DRAINAGE PATTERNS, INCLUDING THROUGH NEW IMPERVIOUS SURFACES, AND REGULATORY REQUIREMENTS AS WELL AS POLICIES TO PROTECT AND IMPROVE DRAINAGE PATTERNS WOULD MINIMIZE EROSION, FLOODING, AND RUNOFF. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

ALTERATION OF DRAINAGE RESULTING IN EROSION/SILTATION

Development facilitated by the 2040 General Plan would not alter the course of any stream or river. In addition, as discussed under Impact HYD-1, above, the 2040 General Plan includes policies under Guiding Policy 8.3-G-1 that discourage the alteration of drainages, including through Implementing Policies 8.3-I-9, 8.3-11, and Policy 8.3-12, which would collectively protect and improve existing drainage patterns. The potential for erosion to occur during construction is further addressed under Impact HYD-1, which details how compliance with regulatory requirements would include BMPs to minimize or avoid potential for erosion during construction. This includes compliance with NPDES requirements, as well as the SRMC and *Contra Costa Clean Water Program Stormwater C.3.*

The 2040 General Plan includes the following Safety Element policy that would minimize or avoid potential impacts associated with erosion of graded areas:

Guiding Policy 9.2-G-1: Minimize risks of personal injury and property damage posed by geologic and seismic hazards.

Policy 9.2-I-10 Control erosion of graded areas with revegetation or other acceptable methods.

Policy 9.2-I-10 supplements existing regulatory requirements to control for erosion from ground-disturbing activities and would further reduce potential for such impacts to occur. Therefore, 2040 General Plan construction impacts related to erosion/siltation from drainage pattern alterations would be less than significant.

Operation

INCREASED RUNOFF RESULTING IN FLOODING

Surfaces that are impervious, such as concrete, asphalt, and structures, are solid and impenetrable by water, meaning that stormwater runoff passes across impervious surfaces rather than filtering through them, such as would occur when surface runoff meets porous soil, or vegetated areas such as lawns and parks. When stormwater runoff moves across impervious surfaces, it gains velocity and volume as the flow progresses and accumulates. These adverse effects are particularly likely to occur where pervious surfaces are reintroduced, such as where water flowing across a paved area meets sand or soil where the pavement ends. Such effects can degrade downstream water quality, and cause soil stability issues associated with erosion.

The discussion provided under Impact HYD-1 addresses potential for runoff and describes that development facilitated by the 2040 General Plan, including implementation of LID features as required for new development by the San Ramon Municipal Code and Contra Costa Clean Water Program, could include infiltration ponds and features to manage stormwater runoff in a way that minimizes runoff. Additionally, Section B6-364 of the SRMC requires future development to comply with the most recent version of the *Contra Costa Clean Water Program Stormwater C.3. Guidebook*, including LID techniques for the reduction and treatment of stormwater runoff. Pursuant to Provision C.3. requirements, all new development and significant redevelopment that creates or replaces 10,000 square feet or more of impervious surfaces must treat stormwater runoff on-site; this would minimize or avoid the potential for increased runoff to occur as a result of development facilitated by the 2040 General Plan. Specifically, projects between 2,500 and 10,000 square feet requiring approvals or permits (including single-family residences) would be required to prepare and submit a Stormwater Control Plan for a Small Land Development Project and implement one of four options provided in the Guidebook to reduce the amount of stormwater runoff.[40]

Development facilitated by the 2040 General Plan would further be designed and implemented consistent with the County Flood Control and Water Conservation District's 50-Year Plan, which encourages local communities to plan for modifying flood control channels to incorporate natural features.[41] Therefore, while future development could result in site-specific drainage pattern alterations, due to the use of LID features and stormwater management, 2040 General Plan operational impacts associated with increased runoff and potential flooding would be less than significant.

ADDITIONAL SOURCE OF RUNOFF EXCEEDING STORM DRAIN SYSTEM CAPACITY

The potential for water quality degradation to occur as a result of polluted runoff is addressed under Impact HYD-1; the 2040 General Plan would not create or contribute substantial new sources of polluted runoff. Development facilitated by the 2040 General Plan would be concentrated as infill development and would not include drainage pattern alterations that would result in exceedance of the storm drain system. As with existing development throughout the General Plan area, future development would connect to the San Ramon existing storm drain system. In addition,

[40] Contra Costa County. 2022. Contra Costa Clean Water Program – Stormwater C.3 Guidebook, 8th Edition. Stormwater Quality Requirements for Development Applications. December 23. https://www.cccleanwater.org/userfiles/kcfinder/files/2022_1223_HAI_StormwaterGuidebook_8th_Edition_FINAL%281%29.pdf (April 2023).

[41] Contra Costa County (Flood Control and Water Conservation District). 2009. The 50 Year Plan "From Channels to Creeks". Adopted March 31. Available: https://www.contracosta.ca.gov/DocumentCenter/View/6853/50---Year-Plan-3-20-09-BOS-compressed-PDF?bidId= (April 2023).

development facilitated by the 2040 General Plan would require verification by the Contra Costa County Flood Control and Water Conservation District and the City Engineering Division that adequate storm drainage facilities exist or are funded prior to project approval.

In addition, the 2040 General Plan includes the following Safety Element guiding policies and policies that would help minimize or avoid potential impacts associated with stormwater drainage and the capacity of existing stormwater drainage systems:

Guiding Policy 9.4-G-1: Protect the community from risks to lives and property posed by flooding and stormwater runoff.

Policy 9.4-I-3 Require new development to prepare hydrologic studies to assess storm runoff impacts on the local and subregional storm drainage systems and/or creek corridors. New development shall implement all applicable and feasible recommendations from the studies.

Policy 9.4-I-4 Require new development to provide a funding mechanism for ongoing maintenance of drainage facilities and other stormwater control measures. Maintenance may be by the City under contract, or by a private entity.

Policy 9.4-I-5 Establish landscape and maintenance guidelines for required detention basins to ensure that such facilities achieve a look and quality that is consistent with the landscape of San Ramon and applicable regulatory requirements.

Policy 9.4-I-3 and Policy 9.4-I-4 collectively ensure that new development is conducted with specific consideration to existing and planned storm drain systems, such that development facilitated by the 2040 General Plan would not contribute additional sources of runoff that could cause exceedance of storm drain systems. Policy P.4-I-5 further supplements regulatory requirements associated with the design and implementation of detention basins required for stormwater control. Through appropriate design and maintenance of storm drain facilities, as supported through the 2040 General Plan and policies therein, 2040 General Plan operational associated with increased runoff exceeding storm drain system capacity impacts would be less than significant.

IMPEDANCE OR REDIRECTION OF FLOOD FLOWS

The potential for water quality degradation to occur as a result of polluted runoff is addressed under Impact HYD-1; the 2040 General Plan would not create or contribute substantial new sources of polluted runoff. Existing stormwater drainage facilities provide for the conveyance of flood flows through incorporated City areas, with FEMA-designated Flood Hazard Areas limited to specific areas adjacent to such facilities. As shown on Figure 3.8-3, limited areas of FEMA-designated Flood Hazard Areas are also identified along waterways in unincorporated area. Development facilitated by the 2040 General Plan would be concentrated as infill development and would occur in compliance with all regulations applicable to the presence of designated Flood Hazard Areas. Development would not be designed or constructed in such a way that flood flows would be impeded or redirected in such a way that adverse impacts could occur. In addition, build-out of development under the 2040 General Plan include appropriately sized and designed drainage facilities and would not result in increased runoff or flooding from drainage pattern alterations.

The 2040 General Plan includes the following Safety Element policies that would help minimize or avoid potential impacts associated with flood flows and drainage pattern alterations:

Guiding Policy 9.4-G-1: Protect the community from risks to lives and property posed by flooding and stormwater runoff.

Policy 9.4-I-1 Reduce hazards caused by local flooding through improvements and ongoing maintenance to the storm drain system and/or creek corridors.

Policy 9.4-I-2 Identify or develop a new forecast-based tool to address the need for increasing frequency of model calibration of high frequency flood events (e.g. 10-year floods) to better understand how climate change will impact these flooding events.

Policy 9.4-I-1 would minimize or avoid the potential for drainage pattern alterations to result in impacts associated with flood flows by providing sufficiently sized storm drain and creek channel capacity. Policy 9.4-I-2 would further avoid such impacts by encouraging proactive planning for future flood flows, including with consideration to the effects of climate change. Through appropriate design and maintenance of storm drain facilities, as well as compliance with regulatory requirements regarding flood flows, 2040 General Plan operational impacts related to impedance or redirection of flood flows would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Risk of Pollutant Release Due to Inundation

Significance Criterion d:	In flood hazard, tsunami, or seiche zones, would the proposed plan risk release of pollutants due to inundation?

Impact HYD-4 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD NOT INCREASE EXISTING POTENTIAL FOR INUNDATION WITHIN FLOOD HAZARD AREAS TO OCCUR AND WOULD NOT INTRODUCE SUBSTANTIAL NEW POLLUTANT SOURCES THAT COULD POTENTIALLY BE RELEASED DUE TO INUNDATION. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Potential impacts associated with risk for release of pollutants during construction activities are addressed under Impact HYD-1. As discussed therein, potential construction-related impacts would be less than significant through regulatory compliance and through implementation of policies to protect and enhance water quality. The presence of construction activities within a FEMA-designated Flood Hazard Area would not alter the potential for water quality impacts to occur, including as related to potential risk of release of pollutants. No construction impacts to water quality resulting from a Flood Hazard Area would occur.

Operation

The General Plan area is not located within the inundation area of any dams, or within a tsunami hazard area, and no enclosed surface water bodies are present that could result in inundation due

to seiche. Therefore, the proposed plan would not introduce a risk of pollutant release due to inundation from dam failure, tsunami, or seiche.

Portions of the 100- and 500-year floodplains are located along existing waterways and stormwater drainage channels within the General Plan area; these channels are specifically managed to provide stormwater control and avoid or minimize potential flooding-related effects to the surrounding areas. The Impact HYD-3 impact discussion related to "Impedance or Redirection of Flood Flows" describes that development within the General Plan area is appropriately served by flood control facilities and programs, which in turn minimizes the potential for inundation from flooding to occur, and thereby reduces the potential for risk of pollutant release to occur. Development facilitated by the 2040 General Plan would not introduce new potential sources of polluted runoff or new hazardous materials or potential for pollutant releases to occur in the General Plan area.

The 2040 General Plan includes the following Safety Element guiding policies and implementing policies that would help minimize or avoid potential impacts associated with Flood Hazard Areas:

Guiding Policy 9.4-G-1: Protect the community from risks to lives and property posed by flooding and stormwater runoff.

Policy 9.4-I-6 Maintain flood insurance rate maps and post for public education.

Policy 9.4-I-8 All new developments shall not increase runoff to the 100-year peak flow in the City's flood control channels or to local creeks and shall be substantially equal to pre-development conditions. All new storm water systems shall be in compliance with the requirements of the City's Stormwater Municipal Regional Permit issued by the San Francisco Regional Water Quality Control Board.

Policy 9.4-I-9 New development shall be required to locate buildings above the one percent annual flood chance (100-year flood) floodplain and outside the special flood hazard area to minimize potential flood damages.

Policy 9.4-I-6, Policy 9.4-I-8, and Policy 9.4-I-9 would collectively ensure that development facilitated by the 2040 General Plan would not change the extent of existing FEMA-designated Flood Hazard Areas, and development would be sited to avoid interference with Flood Hazard Areas. Therefore, while portions of the General Plan area are within FEMA-designated Flood Hazard Areas, the proposed General Plan would not alter existing potential for inundation or pollutant release, and 2040 General Plan operational impacts related impacts to water quality resulting from a Flood Hazard Area would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Water Quality Control and Sustainable Groundwater Management Plan Consistency

Significance Criterion e:	Would the proposed plan conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact HYD-5 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD NOT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF A WATER QUALITY CONTROL PLAN OR SUSTAINABLE GROUNDWATER MANAGEMENT PLAN. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

The potential to result in impacts to groundwater management would be limited to operation, when groundwater supply and recharge could be affected by permanent land use changes. In addition, construction activities would be required to adhere to water quality control regulations, including BMPs, to be included in project-specific SWPPPs for any construction project disturbing more than one acre, as discussed under Impact HYD-1. Therefore, construction of the 2040 General Plan would not conflict with or obstruct implementation of a surface water quality or groundwater quality control plan or sustainable groundwater management plan, and impacts would be less than significant.

Operation

Development facilitated by the 2040 General Plan would be required to adhere to NPDES drainage control requirements as well as municipal requirements to manage surface water quality during operations, as discussed under Impact HYD-1. The proposed plan would not conflict with or obstruct implementation of a water quality control plan. Similarly, groundwater resources are addressed under Impact HYD-2, which details how potential impacts to groundwater would be less than significant. The General Plan area overlies the San Ramon Valley Groundwater Basin, which is designated by DWR as Very Low Priority and, therefore, is not required to be managed under a GSP for SGMA and the Livermore Valley Groundwater Basin, which is designated as Medium Priority and managed by the Zone 7 Water Agency as the exclusive GSP for compliance with SGMA. The Zone 7 Water Agency also provides DSRSD with the majority of its water supply, including groundwater, and manages the basin for continued sustainability.

Water supply provided by EBMUD would not be sourced from groundwater resources and would not conflict with or obstruct implementation of a sustainable groundwater management plan. Water supply provided by DSRSD would be sourced from the GSA responsible for sustainable groundwater management and therefore would not conflict with or obstruct implementation of a sustainable groundwater management plan. Therefore, operation of the 2040 General Plan would not conflict with or obstruct implementation of a surface water or groundwater quality control plan or sustainable groundwater management plan, and impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

3.8.5 Cumulative Impacts

The geographic scope of the cumulative hydrology and water quality analysis consists of the surface area of the watersheds and groundwater basins shown on Figure 3.8-1 and Figure 3.8-2, respectively. Potential impacts associated with surface water and drainage would generally be site-specific and confined within the stormwater drainage and management areas of Ran Ramon; however, hydrologic and water quality issues have the potential to affect downstream areas and using watersheds provides for a conservative evaluation of cumulative impacts. The cumulative analysis considers the nearby past, present, and reasonably foreseeable future plans and projects listed in Table 3-1, *Cumulative Plans and Larger-scale Projects List*, which lists the relevant plans and larger-scale projects considered in conjunction with the proposed plan (refer to Chapter 3.0, *Environmental Impact Analysis*).

Surface Water

Table 3-1, *Cumulative Plans and Larger-scale Projects List*, identifies other general plan, specific plan, and project buildouts that direct the type and intensity of land use and development within specific areas, consisting primarily of residential and commercial projects. As with the proposed 2040 General Plan, cumulative plans and projects would generally occur as infill and would not develop previously undisturbed areas or substantially change drainage patterns of the area. Additionally, regulations protecting surface water would be equally applicable to cumulative projects as the proposed plan, including the NPDES program which requires implementation of SWPPPs with BMPs to minimize or avoid potential impacts to surface waters. Due to the site-specific nature of surface water impacts, the lack of site overlap between cumulative projects and development associated with the 2040 General Plan, and the common applicability of surface water regulations, potential cumulative impacts associated with surface flows and drainage would be less than significant.

Groundwater

Potential impacts to groundwater could occur through direct pumping and consumption of groundwater, or through indirect interference with groundwater recharge. However, development associated with the 2040 General Plan would not directly consume groundwater and would occur in compliance with existing groundwater management plans and programs; development would, therefore, not result in impacts that could combine with impacts of other projects in the cumulative scenario to result in cumulatively considerable impacts. In addition, cumulative projects including development facilitated by the 2040 General Plan would not substantially change drainage patterns of the area (see “Surface Water” above), and cumulative impacts associated with interference with groundwater recharge would be less than significant.

Water Quality

Development facilitated by cumulative plans and projects would comply with policies related to water quality, including through implementation of project-specific SWPPPs as applicable, which require BMPs to minimize or avoid water quality degradation from construction and other ground-disturbing activities. As discussed in Section 3.8.3, *Environmental Setting,* under “National Pollutant Discharge Elimination System,” the City of San Ramon is a member agency of the CCCWP, which assists municipalities and other agencies in Contra Costa County with implementation of the NPDES Permit; the proposed plan as well as cumulative plans listed in Table 3-1 are subject to the same

requirements of the Clean Water Act, and would be implemented in compliance with NPDES and SWPPP requirements, through the CCCWP.

In addition, while development facilitated by the 2040 General Plan could increase site-specific areas of impervious surfaces throughout the General Plan area, LID features associated with new development as required by the San Ramon Municipal Code and Contra Costa Clean Water Program would also minimize potential to increase impervious surfaces and adversely affect infiltration and runoff; such features may include bioretention systems, swales, green roofs, infiltration systems, and permeable pavers. This would in turn facilitate infiltration of surface water to the subsurface and help filter contaminants out of surface runoff as it infiltrates soil to underlying groundwater. Therefore, cumulative impacts to water quality would be less than significant.

Flooding

The cumulative projects, especially the other San Ramon-located cumulative projects, would likely include LID features as part of proposed infill development and development and, thus, would increase the extent of permeable surfaces that would increase the rate and extent of infiltration of surface water runoff, thereby reducing its velocity. Due to the site-specific nature of flooding impacts and the infill characteristics of the proposed plan as well as the other cumulative plans and projects, cumulative impacts related to potential for flooding would be less than significant.

Overall Level of Cumulative Significance

Less than significant

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3.9 Land Use Planning, Population, and Housing

3.9.1 Introduction

This section summarizes San Ramon's land use characteristics, including the overall land use pattern, and analyzes existing plans and areas with development potential in order to determine the potential environmental effects of the proposed plan related to land use planning. Additionally, this section addresses the potential population growth and housing displacement impacts associated with development facilitated by the proposed plan. Information included in this section is partially based on data obtained from the United States Bureau of the Census (US Census), the California Department of Finance (CDF), and the Association of Bay Area Governments and the Metropolitan Transportation Commission (ABAG/MTC).

3.9.2 Environmental Setting

Current Physical Land Use

San Ramon (General Plan Area)

The General Plan area covers the 20.09 square miles (approximately 12,861 acres, including streets, highways, and other transportation corridors) of land comprising the San Ramon planning area within southern Contra Costa County. San Ramon's current land use pattern has resulted from more than a century's long shift from an agricultural community to the present-day built-out city. Residential and commercial development is currently driven by local and regional demand, as well as City-imposed limitations (e.g., zoning, land use designations, and the City's urban growth boundary). San Ramon is characterized as a suburban residential community, as at least 60 percent of San Ramon's developed land is occupied with residential uses (30 percent of General Plan area acreage). Residential development in San Ramon is generally suburban with a loop-style network of curving streets and cul-de-sacs. Higher density residential neighborhoods (6 percent of General Plan area acreage) are generally located closer to commercial uses along arterial streets. As a result, San Ramon is largely comprised of auto-oriented single-family-use areas.

Commercial/service commercial (three percent) and office (four percent) development is concentrated along Interstate 680 (I-680) from Bollinger Canyon Road to the planning area's northern limits. Most of the General Plan area's acreage is devoted to public/institutional land use (39 percent), mostly in the form of open space but also includes churches, schools, and other government-owned property. Less than 2 percent of the General Plan area's acreage contains vacant underutilized parcels. Golf courses (4.5 percent) comprise nearly as much land area as multi-family residential.

Both the number of acres and the general percentage of total area distribution of existing land uses within San Ramon is shown in Table 3.9-1. As shown in Table 3.9-1, the various residential land uses (single-family and multi-family combined) make up the largest share of existing land use within San Ramon.

Table 3.9-1 Distribution of Existing Land Uses in San Ramon General Plan Area

Existing Land Use	Acres	Percentage of Total Area
Single-Family Residential	3,332	30%
Multi-Family Residential	657	5.9%
Office	467	4.2%
Service Commercial	93	0.8%
Commercial	244	2.2%
Vehicle Service	16	0.1%
Hotel	28	0.3%
Hospital	44	0.4%
Park	121	1.1%
Golf Course	499	4.5%
Private Common Area	1,107	10%
Public/Institutional	4,318	39%
Roadway/Circulation	45	0.4%
Vacant Underutilized Parcels	152	1.4%

Source: Land Use Element. San Ramon 2040 General Plan.

Note: Numbers are rounded

Single-family land use types are differentiated by zoning districts that allow rural conservation, hillside residential, single-family-low density, single-family-low medium density, and single-family-medium density. Multi-family housing zones are differentiated by high density and very high density. Additionally, the entirety of San Ramon is divided into Planning Subareas, including Bishop Ranch, Bollinger Canyon, Crow Canyon, Dougherty Hills, Dougherty Valley, Southern San Ramon, Tassajara Valley, Twin Creeks, and Westside.

San Ramon is almost entirely built out or has protected open space with approximately 152 acres of vacant land and/or underutilized parcels within the General Plan area. Most of this vacant or underutilized land is on small parcels, is infill and surrounded by existing development. Vacant land contains various land use designations.

Areas Surrounding General Plan Area

TO THE NORTH

The Town of Danville borders San Ramon to the north. The unincorporated communities of Diablo and Blackhawk are northeast of San Ramon. Directly adjacent land uses are primarily residential neighborhoods with some commercial uses and open space and recreational areas.

TO THE EAST

Unincorporated Contra Costa County borders San Ramon to the east. Directly adjacent land uses include open space.

TO THE SOUTH

The City of Dublin borders San Ramon to the south. Directly adjacent uses include residential neighborhoods.

TO THE WEST

Unincorporated Contra Costa County borders San Ramon to the west. Directly adjacent land uses include open space, including East Bay Regional Park District (EBRPD) Bishop Ranch.

Current Land Use Designations and Zoning

San Ramon (General Plan Area)

The existing (2035) San Ramon General Plan establishes 18 land use designations to provide a mixture of land uses for the City, and the current San Ramon Zoning Code establishes 27 separate zoning categories to provide a mixture of permitted land use densities, heights, and types for the City. Figure 2-3 in Chapter 2.0, *Project Description*, show the City's existing Land Use Designations Map.

Population, Housing, and Employment

San Ramon (General Plan Area)

POPULATION

The City of San Ramon experienced approximately 447 percent growth from 1970 to 1980. After its incorporation in 1983, the City of San Ramon's population grew steadily. From 1980 to 1990, population grew by about 37 percent and growth slowed from 1990 to 2000 with a growth rate of 21 percent. Growth picked up again from 2000 to 2010 when San Ramon's population grew by 38 percent.[1]

Since 2010, the population of San Ramon increased by approximately 0.8 percent per year, with a total increase of approximately 11,500 people during that timeframe.[2] In comparison, the overall population in Contra Costa County during this same timeframe grew slightly faster at 1.1 percent annually.[3] Population growth since 2010 in San Ramon has continued at a slower rate than previous decades (approximately 14 percent from 2010 to 2022). As of January 2022, the City of San Ramon had a population of 83,820 residents.[4]

HOUSEHOLDS AND DWELLING UNITS

A household is defined by the CDF and the US Census as a group of people who occupy a dwelling unit. A household differs from a dwelling unit, because the number of dwelling units includes both occupied and vacant dwelling units. Not all of a jurisdiction's population lives in households. Rather, a portion of a jurisdiction's population lives in group quarters, such as board and care facilities; others are experiencing homelessness.

Small households, consisting of one to two persons per household, generally reside in units with zero to two bedrooms; family households of three to four persons per household normally reside in units with three to four bedrooms. Large households of five or more persons per household typically

[1] MTC/ABAG. 2023. Bay Area Census City of San Ramon. Available: < http://www.bayareacensus.ca.gov/cities/SanRamon.htm >. (accessed March 2023)
[2] CDF. 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State. Available: <https://dof.ca.gov/forecasting/demographics/estimates/>. (accessed March 2023)
[3] CDF. 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State. Available: <https://dof.ca.gov/forecasting/demographics/estimates/>. (accessed March 2023)
[4] CDF. 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State. Available: <https://dof.ca.gov/forecasting/demographics/estimates/>. (accessed March 2023)

reside in units with four or more bedrooms. However, the number of units in relation to the household size may also reflect preference and economics. Many small households obtain larger units and some large households live in small units for economic reasons.

As of 2022, there were approximately 29,460 dwelling units in San Ramon. Most of San Ramon's households reside in single-family dwelling units, with over 73 percent of the San Ramon current housing stock consisting of detached or attached single-family homes. 27 percent of homes in San Ramon are multi-family units, including condominiums. San Ramon had experienced steady growth in housing supply to support a growing population from 2000 to 2010, during which an average of 867 units per year were constructed. Housing supply growth slowed drastically from 2010 to 2022, when an average of only 270 units were constructed per year, an increase of approximately 12 percent total.

San Ramon experiences a very low housing vacancy rate of 2.7 percent, which is lower than both the State average of 8.1 percent and the Contra Costa County average of 6.4 percent. A low vacancy rate indicates the need for additional supply of housing.

EMPLOYMENT

Employment indicates the number of people who reside in a jurisdiction that have a job within or outside of that jurisdiction. San Ramon has approximately 54,000 jobs, which is 13 percent of all Contra Costa County.[5] Approximately 45,000 residents in San Ramon are employed.[6] Between 2010 and 2020, San Ramon added approximately 6,000 jobs, an 11 percent increase. The number of employed residents has grown from 36,240 in 2010, a 20 percent increase; this indicates that the number of employed residents has outpaced population growth.

JOBS-HOUSEHOLD RATIO

The jobs-household ratio in a jurisdiction is an overall indicator of jobs availability within the area. A balance of jobs and households can give residents an opportunity to work locally and avoid employment commutes to other places in the region. San Ramon has slightly fewer employed residents living in San Ramon (45,000 residents) than it has jobs (54,000 jobs). This indicates that the San Ramon jobs to employed ratio is 1.2, which means that the number of jobs in San Ramon exceeds the number of employed residents by 20 percent. ABAG's growth pattern depicting projected household and job growth by "superdistrict" illustrates a 2015 job to household ratio of 0.9 in southern Contra Costa County, which is significantly below the region-wide average of 1.5.[7] San Ramon's jobs per household ratio being above one indicates that regional residents are likely commuting to employment inside of San Ramon. In general, most households have more than one worker; therefore, a ratio of jobs to household should be well above 1:1 to have a balance of jobs to households.

[5] ABAG. 2017. Plan Bay Area 2040 Projections. https://mtc.ca.gov/sites/default/files/Projections_2040-ABAG-MTC-web.pdf (accessed March 2023).
[6] ABAG. 2017. Plan Bay Area 2040 Projections. https://mtc.ca.gov/sites/default/files/Projections_2040-ABAG-MTC-web.pdf (accessed March 2023).
[7] ABAG. 2021. Plan Bay Area 2050 Growth Pattern. Updated January 21, 2021. https://www.planbayarea.org/sites/default/files/FinalBlueprintRelease_December2020_GrowthPattern_Jan2021Update.pdf (accessed March 2023)

3.9.3 Regulatory Framework

Federal Regulations

No federal plans, policies, regulations, or laws related to population and housing are applicable to the proposed plan.

State Regulations

California Government Code

California Government Code Section 65300 regulates the substantive and topical requirements of general plans. State law requires each city and county to adopt a general plan "for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning." The California Supreme Court has called the general plan the "constitution for future development." The general plan expresses the community's development goals and embodies public policy relative to the distribution of future land uses, both public and private.

California Government Code Section 65301 requires a general plan to address the geographic territory of the local jurisdiction and any other territory outside its boundaries that bears relation to the planning of the jurisdiction. The jurisdiction may exercise its own judgment in determining what areas outside of its boundaries to include in the Planning Area. The State of California General Plan Guidelines state that the Planning Area for a city should include (at minimum) all land within the city limits and all land within the city's sphere of influence. The proposed plan would not facilitate land use changes outside of city limits and within the sphere of influence; therefore, the plan area for the proposed plan consists of San Ramon city limits.

Local and Regional Regulations

Plan Bay Area 2050 and ABAG Regional Housing Needs Allocation

The ABAG/MTC Plan Bay Area 2050, adopted in October 2021, integrated transportation and land-use plan for the nine-county San Francisco Bay Area, including Contra Costa County. Plan Bay Area 2050 meets all state and federal requirements for a Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). Plan Bay Area 2050 describes where and how the region can accommodate the additional 1.4 million new households and 1.4 million new jobs projected in the Bay Area by 2050 and details the regional transportation investment strategy over this period. Plan Bay Area 2050 identifies 35 strategies focused on improving housing, the economy, transportation, and the environment across the Bay Area over a 30-year period. Four geographic areas are identified in Plan Bay area 2050 to guide where future growth in housing and jobs would be focused over the next 30 years: Priority Development Areas (PDA), Priority Production Areas, Transit-Rich Areas, and High-Resource Areas. ABAG and MTC developed land use and transportation scenarios in Plan Bay Area 2050 that distributes the total amount of anticipated growth across the region and evaluates how well each scenario measures against the Plan goals. Based upon performance, the preferred scenario provides a regional pattern of household and employment growth and a corresponding transportation investment strategy.

San Ramon General Plan

The current San Ramon General Plan contains policies related to land use/planning and population/housing, but they would be replaced by the proposed 2040 General Plan.

San Ramon Village Specific Plan

The San Ramon Village Specific Plan (SRVSP) provides a vision for an area of San Ramon that is currently underutilized but has the potential to develop into a vibrant mixed-use district for the community. The purpose of the SRVSP is to guide the evolution of this 134-acre office and service commercial area in a way that will encourage coordinated development, which responds to citywide and regional objectives as well as to local and neighborhood considerations. A key objective is to create a new mixed-use residential and retail village node, while strengthening the role of San Ramon Valley Boulevard as a commercial corridor and preserving viable existing service commercial uses wishing to remain.[8]

San Ramon Priority Development Areas

Cities and counties within the jurisdiction of ABAG identify and delineate Priority Development Areas (PDAs), or areas near public transit planned to contain new homes, jobs, and community amenities. Local governments nominate these areas to ABAG for designation as a PDA, and if adopted by ABAG, the PDA Planning and Technical Assistance Grant programs become available to that local government. The PDA eligibility criteria include but are not limited to at least 50 percent of the PDA being within 0.5 mile of an existing or planned rail station or ferry terminal, a bus stop with peak service frequency of 15 minutes or less, or at least 50 percent of the area being defined as a High or Highest Resource area by the California Department of Housing and Community Development.[9]

San Ramon contains two contiguous PDAs. The North Camino Ramon PDA is generally located east of I-680, south of Fostoria Way, west of Alcosta Boulevard, and north of Executive Parkway. The City Center PDA is generally located in the area east of I-680, south of Executive Parkway, west of Alcosta Boulevard, and north of Ascot Drive.

San Ramon Municipal Code and Zoning Ordinance

Zoning is the primary tool used to implement a community's general plan. A major difference between a general plan and zoning ordinance is that the general plan provides general guidance on the location, type, and density of new growth and development over the long term, while the zoning ordinance provides detailed development and use standards for each parcel of land. The zoning ordinance divides the community into zoning districts and specifies the uses that are permitted, conditionally permitted, and in some instances, which uses are specifically prohibited within each district.

Typically, a zoning ordinance consists of text and a map delineating districts for such basic land uses as residential, commercial, and industrial, and establishing special regulations for historic preservation, floodplains, hillside development and other specific concerns. For each of the basic land uses, the zoning ordinance text typically includes an explanation of the purpose of the zoning district; a list of principally permitted and conditionally permitted uses; and standards for minimum lot size, density, height, lot coverage, setback, and parking. The zoning ordinance also typically describes procedures for processing discretionary approvals.

[8] San Ramon, City of. 2020. San Ramon Village Specific Plan. Adopted November 24, 2020. https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_10826046/File/Our%20City/Departments/Community%20Development/Planning/Specific%20Plans/San%20Ramon%20Village%20Specific%20Plan/SRVSP,%20Adopted%2011.24.20.pdf (accessed March 2023).
[9] MTC. 2023. Priority Development Areas. Available: <https://mtc.ca.gov/planning/land-use/priority-development-areas-pdas>. (accessed March 2023)

The San Ramon Zoning Ordinance (San Ramon Municipal Code Title D) includes 27 zoning districts and was last revised February 2020. Each zoning district has developed standards that are designed to protect and promote the health, safety, and general welfare of the community and to implement the policies of the General Plan. The zoning districts only apply to land within City limits and the standards aim to preserve the character and integrity of existing neighborhoods. Within a typical district there are regulations related to land use, lot size, coverage, building heights, parking, and landscaping.

The 27 zoning districts established by the San Ramon Zoning Ordinance are:

- RC (Rural Conservation – 0.0 to 0.2 du/ac)
- HR (Hillside Residential – 0.0 to 2.0 du/ac)
- RE (Residential Estate – 0.2 to 3.0 du/ac)
- RS (Single-Family Residential – 3.0 to 12.0 du/ac)
- RM (Medium-Density Residential – 6.0 to 14.0 du/ac)
- RHM (Medium-High Density Residential – 14.0 to 22.0 du/ac)
- RH (High-Density Residential – 22.0 to 30.0 du/ac)
- RVH (Multiple Family-Very High Density – 30.0 to 50.0 du/ac)
- MU (Mixed Use – 14.0 to 30.0 du/ac and 0.70 FAR – 1.00 FAR maximum)
- CCMU (City Center Mixed Use – 22.0 to 50.0 du/ac and 0.70 to 1.35 FAR maximum)
- MU-C (Commercial Mixed Use – 0.70 FAR maximum)
- OA (Administrative Office – 0.45 FAR maximum)
- OL (Limited Office – 0.45 FAR maximum)
- CC (Community Commercial – 0.45 FAR maximum)
- CT (Thoroughfare Commercial – 0.50 FAR maximum)
- CS (Service Commercial – 0.50 FAR maximum)
- CR (Commercial Recreation – 0.35 FAR maximum)
- MW (Manufacturing/Warehousing – 0.50 FAR maximum)
- AG (Agriculture – 0.0 to 1.0 du/ac and 0.10 FAR maximum)
- OS-1 (Open Space – no development)
- OS-2 (Open Space – up to 1.0 du/20 ac and FAR 0.10 maximum)
- P (Parks and Recreation – 0.10 FAR maximum)
- GC (Golf Course)
- PS (Public and Semi-Public – 0.35 FAR maximum)
- M-1 (Medical Center – 0.35 FAR maximum)
- M-2 (Health Facility – 0.35 FAR maximum)
- PD (Planned Development)

3.9.4 Impacts and Mitigation Measures

Significance Criteria

The City of San Ramon utilizes the following 2022 *CEQA Guidelines* Appendix G significance criteria questions related to Land Use Planning, Population, and Housing.

Would the 2040 General Plan:

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?
c) 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?
d) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Approach to Analysis

Land Use Planning

The evaluation of proposed plan impacts related to land use planning is based on a comparison of the 2040 General Plan to the applicable plans, policies, and regulations to determine if development facilitated by the proposed plan would conflict with a plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. This section also analyzes whether development facilitated by the proposed plan, or its policies would physically divide communities.

Implementation of the proposed plan could result in a significant impact if it conflicts with applicable land use plans and policies of the SRVSP, ABAG/MTC Plan Bay Area 2050, San Ramon Municipal Code, and the Bay Area Air Quality Management District (BAAQMD) 2017 Clean Air Plan.

A policy inconsistency is considered a significant adverse impact only if the inconsistency would result in a significant adverse physical impact based on the established significance criterion. Consistency of the proposed plan with applicable land use plans and policies is evaluated below.

Consistency of the proposed plan with the BAAQMD 2017 Clean Air Plan is discussed in Section 3.2, *Air Quality.* Consistency with the existing Zoning Ordinance in the San Ramon Municipal Code is not evaluated, since adoption of the 2040 General Plan would require revisions to the Zoning Ordinance and Zoning Map to ensure consistency with the 2040 General Plan. Consistency with the San Ramon Municipal Code with respect to protected trees are evaluated in Section 3.3, *Biological, Agriculture, and Forestry Resources*.

Population and Housing

Population and housing trends in San Ramon were evaluated by reviewing the most current data available from the US Census Bureau, CDF, the current San Ramon General Plan, ABAG, and the 2023-2031 RHNA. Impacts related to population are generally social or economic in nature. Under CEQA, a social or economic change is not considered a significant effect on the environment unless the changes are directly linked to a physical change.

For purposes of this analysis, substantial population growth is defined as growth exceeding ABAG or BAAQMD population forecasts for San Ramon. Substantial displacement would occur if allowed land uses would displace substantially more residences than would be accommodated through growth accommodated by the proposed plan.

EIR Scoping Comments Consideration

No comments that pertain to land use planning or population and housing were received in response to publication of the Notice of Preparation for this EIR.

Specific Thresholds of Significance

For purposes of this analysis, the following thresholds are used to evaluate the significance of land use/planning and population/housing impacts resulting from implementation of the proposed plan.

- Development resulting in physically dividing a community area within San Ramon.
- Development conflicting with the SRVSP or Municipal Code.
- Inducement of permanent or daytime population or employment growth in the San Ramon planning area that would exceed City of San Ramon or ABAG population projections for San Ramon.
- Displacement of existing housing or permanent population.

Impact Evaluation

Established Community Division

Significance Criterion a: Would the proposed plan physically divide an established community?

Impact LU-1 IMPLEMENTATION OF THE PROPOSED 2040 GENERAL PLAN WOULD MAINTAIN ORDERLY DEVELOPMENT IN SAN RAMON AND WOULD NOT PHYSICALLY DIVIDE AN ESTABLISHED COMMUNITY. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Impacts related to physical division of an established community are limited to operational impacts. To the extent that construction activities obstruct roads, it would be temporary and would not constitute a division of an established community. No respective construction impacts would occur related to potential division of a community.

Operation

While significant land areas within San Ramon remain publicly owned and undeveloped (39 percent) with planned purpose of conserving open space and reducing urban sprawl, development facilitated by the 2040 General Plan would mostly occur on vacant or underutilized parcels near existing development. As summarized in Table 3.9-1, commercial and office uses are mostly concentrated along I-680 from Bollinger Canyon Road to the city's northern limits and account for about seven percent of San Ramon's existing land use. Vacant parcels comprise only 1.5 percent of all land within the General Plan area; this limits new housing and development opportunities under existing zoning designations and without sprawling low-density development. Most vacant parcels are small and would require parcel consolidation to accommodate future development. As such, most new

housing and development facilitated by the 2040 General Plan would occur through development of existing underutilized land and reuse of existing buildings and would increase the density and intensity of the existing land uses within San Ramon. As described in Section 2.6 of the Project Description, the Zoning Ordinance would be updated to ensure consistency with the General Plan and to allow this increase in density and intensity of existing land uses, which aims to result in orderly development. The proposed plan does not include substantial land use or circulation changes that would physically divide an established community, residential, or otherwise. For example, no major roads or other facilities would be constructed that would physically divide established communities within San Ramon.

The potential growth associated with the 2040 General Plan is based on net new development assumptions/projections for residential (10,155 dwelling units) and non-residential (347,339 gross square feet) development for all land within the General Plan area through the year 2040. Vacant and underutilized parcels were identified using existing land use data from the Assessor's Office. Collectively, the existing uses, development capacity on the vacant and underutilized sites, planned and approved projects, and intensified development for residential, non-residential, and mixed-use sum up to be San Ramon's total buildout capacity in 2040. The 2040 General Plan seeks to ensure that infill development is done in a way that captures opportunities to increase the local base of high-paying jobs while achieving a commercial business mix of uses that better serves resident needs and attracts visitors.

San Ramon is surrounded by existing development and natural features (such as the Diablo Range, Las Trampas Regional Wilderness, and Bishop Ranch Regional Preserve), and neighboring development within Danville to the north and Dublin to the south. As discussed above in Section 3.9.2, *Environmental Setting*, much of San Ramon is developed with residential uses with established recreational parks and preserved green spaces. The 2040 General Plan includes policies and establishes land use designations that identify the type and intensity of uses permissible in the General Plan area. Infill development and the creative reuse and development of existing sites have emerged as the primary means for accommodating future growth in San Ramon while conserving open space. Intensity/density standards are established for each land use classification. The intent of the land use designations is to adequately classify and distinguish the various land uses needed within the General Plan area. The 2040 General Plan also aims to direct growth within the San Ramon Sphere of Influence to ensure orderly buildout in density and intensity while maintaining existing neighborhood characteristics and encourage economic development that is compatible with existing uses to reinforce and create a cohesive community.

The existing transportation network in San Ramon also presents constraints to future development, despite the ample variety of regional transportation connections. The 2040 General Plan notes that one of the greatest challenges is congestion on arterials like Bollinger Canyon Road and I-680 interchange areas. Adding roadway lanes is not feasible nor would roadway expansion resolve congestion over the long term. Solutions like improving access to public transit and encouraging walking and bicycling may relieve congestion. Further, many residential and collector streets have discontinuous sidewalks, making it difficult to safely walk throughout San Ramon. As adjacent parcels develop or redevelop, San Ramon typically requires sidewalk improvements. However, where development is unlikely in the near-term, a prioritized plan for addressing these gaps in the network is needed.

The 2040 General Plan emphasizes the integration of land use and transportation as a major focus to reinforcing community cohesion and accessibility in the Land Use Element. Policies in the 2040 General Plan Land Use Element, as well as the Circulation Element, support San Ramon in embracing

changes to circulation issues created by land use choices by planning for the future and maintaining flexible land use regulations that embrace smarter land use planning around transportation. Providing this link between land use and transportation planning reduces the necessity for new high volume arterial roads that could otherwise physically divide communities.

The 2040 General Plan Land Use Element contains guiding policies and implementing policies, listed below, that would maintain existing communities within San Ramon and ensure that established communities would not be divided by development facilitated by the 2040 General Plan.

Guiding Policy 4.6-G-1: Foster a pattern of development that enhances the existing character of the City, and encourages land use concepts that contribute to the design of the community.

Policy 4.6-I-1 Maintain an Urban Growth Boundary (UGB), as shown on the General Plan Diagram that limits the extent of urban development and services within the San Ramon Planning Area. Amendments to the Urban Growth Boundary greater than 25 acres require City voter approval.

Policy 4.6-I-10 Provide a wide range of housing opportunities for current and future residents.

Guiding Policy 4.8-G-1: Maintain and enhance San Ramon's identity.

Policy 4.8-I-5 Encourage the linkage and integration of new development with existing neighborhoods by means of Complete Streets networks, open space areas, parks, pathways, associated rights-of-way, and/or easements as a means of enhancing pedestrian and bicycle connections.

Guiding Policy GP 11.5.1-1: Provide a diversity of housing types and affordability levels within San Ramon to meet the needs of community residents.

Policy IP 11.5.1-6 Maintain a variety of housing types that complements the employment opportunities within the community and encourages a jobs/housing balance.

Guiding Policy 11.5.2-1: Create safe and aesthetically-pleasing neighborhoods, and provide adequate housing to meet the needs of all household types and income groups.

Policy IP 11.5.2-1 Promote increased awareness of the importance of property maintenance to long-term housing quality and engage the community to preserve neighborhoods.

Policy IP 11.5.2-6 Work to preserve the long-term affordability of publicly assisted affordable housing units and to discourage their conversion to market-rate housing.

These 2040 General Plan guiding policies and implementing policies would help maintain existing communities in San Ramon and prevent division of established communities by development facilitated by the 2040 General Plan. Specifically, Guiding Policy 4.6-G-1 and associated policies would ensure that a wide range of housing opportunities for current residents are provided within the City's UGB. Policy 4.8-1-5 encourages connected and accessible clustered neighborhoods, both existing and new. Policy IP 11.5.1-6 calls for the maintenance of a variety of housing types. Lastly, Guiding Policy 11.5.2-1 and associated policies seek to promote community preservation, including housing affordability. In addition, the Zoning Ordinance would be updated to ensure consistency with the General Plan to facilitate the City's implementation of these policies.

Overall, the 2040 General Plan would promote orderly development in San Ramon by encouraging growth in designated development focus areas and at infill sites near amenities while promoting the enhancement of the San Ramon multimodal circulation system, maximizing connections, and minimizing barriers to connectivity. Therefore, the 2040 General Plan would not physically divide San Ramon, and development facilitated by the 2040 General Plan would result in a less than significant impact.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

Less than significant without mitigation

Land Use Plans, Policies, and Regulations Consistency

Significance Criterion b:	Would the proposed plan 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?

Impact LU-2 IMPLEMENTATION OF THE 2040 GENERAL PLAN WOULD BE GENERALLY CONSISTENT WITH APPLICABLE LAND USE PLANS, POLICIES, OR REGULATIONS ADOPTED TO AVOID OR MITIGATE ENVIRONMENTAL EFFECTS, SUCH AS THE SRVSP AND ABAG/MTC PLAN BAY AREA 2050. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Impacts related to consistency with applicable land use plans and policies are limited to operational impacts. No respective construction impacts would occur from development facilitated by the proposed plan.

Operation

CONSISTENCY WITH THE SAN RAMON VILLAGE SPECIFIC PLAN

The SRVSP provides a vision for an area of San Ramon that is currently underutilized but has the potential to develop into a vibrant mixed-use district for the community. A key objective is to create a new mixed-use residential and retail village node in the heart of the San Ramon Village. The SRVSP provides guidelines that encourage thoughtful new development that complements and enhances existing uses. Table 3.9-2 includes four relevant SRVSP objectives and analysis that addresses whether the 2040 General Plan would be consistent with the policies.

Table 3.9-2 2040 General Plan Consistency with SRVSP

SRVSP Objective	2040 General Plan Consistency
LU-1: Encourage a vibrant Village Center at the intersection of Deerwood Road and San Ramon Valley Boulevard with a mix of residential, retail, restaurant, hotel, office, and other commercial uses that cater to the needs of local residents and visitors to the San Ramon Village area.	**Consistent**. The 2040 General Plan includes two policies that directly relate to vibrancy within the San Ramon Village area: Policy 2.3-I-12: Work toward redevelopment and revitalization in the Crow Canyon area through implementation of the San Ramon Village Specific Plan to address the City's future needs for residential and non-residential development. Policy 4.7-I-2: Ensure new development within the Plan Area is consistent with the adopted San Ramon Village Specific Plan and pursue future opportunities to update the Plan as needed to address the changing market opportunities and land use, infrastructure, and finance needs based on post RDA conditions. Adherence to these proposed 2040 General Plan policies would ensure consistency with SRVSP Objective LU-1 by calling for implementation of the SRVSP within that area.
LU-4: Promote a diverse range of housing options to accommodate variety of different household types.	**Consistent.** The General Plan includes two policies that broadly call for housing diversity throughout the city, including within the SRVSP area. Such policies include: Policy 11.5.4-1: Utilize the Urban Growth Boundary as a tool to focus the provision of diverse housing options through infill housing development projects near employment, shops/services, and transportation corridors; particularly within the City's core and Priority Development Areas. Policy 3.1-I-3: Provide a variety of diverse housing options to accommodate the local employment base. Adherence to these proposed 2040 General Plan policies would promote a diverse range of housing options in consistency with SRVSP Objective LU-4.
CIR-2: Improve streetscapes in the Village Center and on San Ramon Valley Boulevard to support economic vitality and heighten sense of place.	**Consistent**. The 2040 General Plan includes four policies that relate to improvement of the Village Center: Policy 2.3-I-12: Work toward redevelopment and revitalization in the Crow Canyon area through implementation of the San Ramon Village Specific Plan to address the City's future needs for residential and non-residential development. Policy 4.7-I-2: Ensure new development within the Plan Area is consistent with the adopted San Ramon Village Specific Plan and pursue future opportunities to update the Plan as needed to address the changing market opportunities and land use, infrastructure, and finance needs based on post RDA conditions. Additionally, the following two policies call for beautification of streetscapes and economic vitality, respectively: Policy 4.8-I-1: Continue to develop and refine community design documents such as the San Ramon Beautification Plan, Creek Corridor Plan, Street Beautification Plan, Street Beautification Guidelines, Architectural Review guidelines and Engineering Design, Grading, and Procedures Manual to provide comprehensive design guidelines for beautification of streetscapes, creek corridors, City signs, public art, and community entries in San Ramon. Policy 2.3-I-22: Through proactive economic development marketing and business attraction efforts, encourage diverse and complementary economic growth along with the retention of existing businesses within the City, particularly in the retail sector. Adherence to these proposed 2040 General Plan policies would improve streetscapes and support economic vitality in consistency with SRVSP Objective CIR-2.

SRVSP Objective	2040 General Plan Consistency
CIR-3: Promote pedestrian connectivity and walkability in the Village Center.	**Consistent**. The 2040 General Plan contains several policies that call for pedestrian connectivity and walkability throughout the city, including: Policy 4.6-I-24: Continue to refine objective design standards for mixed use development that will result in pedestrian-scaled environments, with one-to-four story buildings, integrated parking, streetfront windows, and entries, and public and private open space or as provided under a separate Specific Plan process. Policy 4.6-I-25: Promote incentives that will provide for density and FAR bonuses for mixed-use development that includes amenities for public benefit, such as workforce housing, pedestrian-oriented facilities (outdoor seating, plazas, weather protection, transit waiting areas), historic preservation, cultural facilities, public art and water features, and open space preservation. Inclusionary housing requirements would apply. Policy 4.8-I-5: Encourage the linkage and integration of new development with existing neighborhoods by means of Complete Streets networks, open space areas, parks, pathways, associated rights-of-way, and/or easements as a means of enhancing pedestrian and bicycle connections. Policy 5.7-I-6: Continue to promote and implement through the development review process, continuous circulation facilities within commercial districts and residential neighborhoods to enhance connectivity and promote pedestrian and bicycle modes of transportation consistent with Complete Streets concepts. Policy 12.7-I-5: Construct and promote infrastructure and facilities that support and encourages the use of low-emission transportation and alternative modes of travel, including safe and comprehensive bicycle and pedestrian system that connects all parts of the city and development standards that require installation of alternative fuel infrastructure, such as electric vehicle chargers and hydrogen fueling stations. Policy 3.6-I-4: As part of the development review process, support the accommodation of public transit, bicycle, and pedestrian access for new development. Adherence to these proposed 2040 General Plan policies would promote pedestrian connectivity and walkability in consistency with SRVSP Objective CIR-3.

Source: San Ramon, City of. 2020. San Ramon Village Specific Plan. Adopted November 24, 2020.

As shown in Table 3.9-2, the 2040 General Plan would be consistent with the guiding policies contained in the SRVSP.

CONSISTENCY WITH ABAG/MTC PLAN BAY AREA 2050

Plan Bay Area 2050 is a long-range land use and transportation plan for the San Francisco Bay Area region. The plan contains 11 overarching strategies with associated specific strategies that seek to promote healthy, safe, and equitable communities by reducing impacts from air pollution, protecting open space and agriculture, and increasing active transportation. 2040 General Plan consistency with such strategies in the Plan Bay Area 2050 are addressed below in Table 3.9-3.

Table 3.9-3 2040 General Plan Consistency with Plan Bay Area 2050 Goals

Plan Bay Area Strategies	2040 General Plan Consistency
Housing Strategies	
H2. Preserve existing affordable housing. Acquire homes currently affordable to low and middle-income residents for preservation as permanently deed-restricted affordable housing.	**Consistent.** The proposed 2040 General Plan promotes the preservation and creation of affordable housing through implementation of several policies, including: Policy IP 11.5.1-5: Require new housing development projects to comply with the City Inclusionary Housing Ordinance to provide development and/or in-lieu fees for affordable housing to extremely low, very low, low, and moderate income households. Policy IP 11.5.1-18: Require commercial and non-residential development to contribute to the supply of affordable housing (including extremely low-income households) through new construction, partnerships with non-profit affordable housing providers, or payment of linkage fees through compliance with the Affordable Housing Commercial Linkage Fee Ordinance. Policy IP 11.5.1-19: Convene the Housing Advisory Committee (HAC) as needed to ensure that housing policies and programs are implemented and to create and retain affordable housing in the City of San Ramon. Policy IP 11.5.2-6: Work to preserve the long-term affordability of publicly assisted affordable housing units and to discourage their conversion to market-rate housing. Therefore, the 2040 General Plan would be consistent with strategy H2.
H3. Allow a greater mix of housing densities and types in Growth Geographies. Allow a variety of housing types at a range of densities to be built in Priority Development Areas, select Transit-Rich Areas and select High-Resource Areas.	**Consistent.** The 2040 General Plan includes several policies that encourage a mix of housing densities and types, including: Policy IP 11.5.1-6: Maintain a variety of housing types that complements the employment opportunities within the community and encourages a jobs/housing balance. Policy IP 11.5.1-7: Encourage diversity of unit size and number of bedrooms within multi-family housing developments (exempting senior projects) and strive to provide three- and four-bedroom units for large households. Policy 11.5.1-15: Utilize affordable housing agreements, when appropriate, to encourage a full range of housing types. Policy IP 11.5.3-4: Facilitate the development of a variety of housing types to foster housing mobility Policy 11.5.3-6: Distribute new affordable housing opportunities throughout the City to avoid overconcentration low income housing in specific neighborhoods. Policy 3.1-I-3: Provide a variety of diverse housing options to accommodate the local employment base. Therefore, the 2040 General Plan would be consistent with strategy H3.
H4. Build adequate affordable housing to ensure homes for all. Construct enough deed restricted affordable homes to fill the existing gap in housing for the unhoused community and to meet the needs of low-income households.	**Consistent.** The 2040 General Plan includes several policies that promote the construction of affordable housing, including: Policy IP 11.5.1-4: Facilitate the development of affordable housing throughout the community through use of financial and or regulatory incentives, where feasible. Policy IP 11.5.1-12: Require non-residential development to contribute to the supply of housing affordable to lower income households, including extremely low income households through the Commercial Linkage Fee program.

Plan Bay Area Strategies	2040 General Plan Consistency
	Policy IP 11.5.1-13: Disperse below-market rate (BMR) housing throughout residential neighborhoods and within housing development projects. Ensure that affordable units are indistinguishable from surrounding market-rate units. Policy IP 11.5.1-16: Work with neighboring jurisdictions in the Tri-Valley area to promote and encourage the development of affordable housing. Therefore, the 2040 General Plan would be consistent with strategy H4.
Economic Strategies	
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.	**Consistent.** The 2040 General Plan includes several policies that encourage transit service for commercial development. Policy 5.6-I-2: Encourage and assist major employers and property managers of commercial sites with 50 or more employees to reduce the number of single-occupant vehicles by participating in the City's TDM programs, including the commuter benefit program, and programs provided by the Bay Area Air Quality Management District. Policy 5.6-I-3: Encourage additional local bus or other public transportation service providers to and from regional transit lines. The City shall strive to improve the transit service to and from all neighborhoods and commercial districts in San Ramon. Policy 5.6-I-9: Encourage employers and commercial complexes to emphasize public transit services or private alternatives to the single-occupant vehicle. Therefore, the 2040 General Plan would be consistent with strategy EC4.
EC6. Retain and invest in key industrial lands. Implement local land use policies to protect key industrial lands, identified as Priority Production Areas, while funding key infrastructure improvements in these areas	**Consistent.** The 2040 General Plan aims to increase industrial by 250,000 to 500,000 square feet. Therefore, the 2040 General Plan would be consistent with strategy EC6.

Source: MTC/ABAG. 2021. Plan Bay Area 2050.

As shown in Table 3.9-3, the 2040 General Plan would be consistent with the goals contained in the Plan Bay Area 2050.

Implementation of the various 2040 General Plan guiding policies and implementing policies identified within this Impact LU-2 analysis would result in 2040 General Plan consistency with applicable, adopted, land use plans, regulations, and policies. The Zoning Ordinance would also be updated to ensure consistency with the General Plan. Therefore, 2040 General plan operational impacts related to land use plans and policies consistency would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

Less than significant without mitigation

Unplanned Population Growth Inducement

Significance Criterion c:	Would the proposed plan 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)?

Impact LU-3 IMPLEMENTATION OF THE PROPOSED PLAN WOULD FACILITATE THE CONSTRUCTION OF NEW HOUSING IN SAN RAMON. PROPOSED DEVELOPMENT COULD RESULT IN AN INCREASE IN POPULATION THAT WOULD EXCEED ABAG POPULATION FORECASTS BY 35 PERCENT BY 2040. HOWEVER, THE PROPOSED PLAN IS INTENDED TO ACCOMMODATE AND PLAN FOR POPULATION GROWTH. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Impacts related to inducing substantial unplanned population growth in an area, either directly or indirectly are limited to operational impacts. No respective construction impacts would occur from development facilitated by the 2040 General Plan.

Operation

Table 3.9-4 presents population, dwelling units, and employment projections through 2040 (the 2040 General Plan horizon year) for San Ramon (the General Plan area), based on Plan Bay Area 2040 estimates. The projections suggest that San Ramon's population will grow approximately 0.4 percent between 2022 and 2040. This translates to an estimated 345 new residents by 2040. New dwelling units are expected to increase by 5 percent between 2022 and 2040, for a total of 1,460 new units. Increased land uses and cultivation of a commercial business mix of uses that better serve residents needs and attract visitors is anticipated to increase employment by approximately 33 percent from 2022 levels, for a total of approximately 71,775 new jobs by 2040.

Table 3.9-4 Plan Bay Area 2040 San Ramon Population, Dwelling Units, and Employment

San Ramon	2022	2040	Change 2022 to 2040	Percent Change 2022 to 2040
Population	83,820	84,165	345	0.4%
Dwelling Units	29,460	30,920	1,460	5%
Jobs	54,000	71,775	17,775	32.9%
Jobs-Household Ratio	1.8	2.3	0.5	27.7%

Sources: CDF. 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State 2010-2022; ABAG. 2019. Projections 2040 by Jurisdiction; ABAG. 2021. Plan Bay Area 2040 Growth Pattern.

However, development facilitated by the 2040 General Plan is anticipated to result in approximately 10,155 net new residential units in San Ramon through 2040. This additional housing, coupled with ongoing and planned development, would lead to an increase of approximately 26,269 net new residents in San Ramon from 2022 to 2040, based on an estimated 2.92 persons per household and adjusted for an estimated 5 percent vacancy rate (see Table 2-1 in Section 2.0, *Project Description*). In the unlikely event that all potential buildout of the 2040 General Plan occurs, the total population of San Ramon in 2040 would be 110,089, which is 31 percent above ABAG's 2040 population

forecast of 84,165, as shown in Table 3.9-4. However, the ABAG growth projection is based on the land use assumptions in the existing San Ramon General Plan. Growth anticipated under the proposed 2040 General Plan is intended in part to meet regional housing needs over the long term. Although the 2040 General Plan would facilitate development beyond what is forecasted by ABAG, it would bring the forecasts for the San Ramon General Plan and RTP/SCS into consistency when the RTP/SCS is next updated to reflect new forecasts for each city in the region. Note that growth assumptions within this EIR are conservative and potentially unlikely to come to complete fruition, and accordingly future RTP/SCS forecasts may provide more realistic growth assumptions, which would be lower than the growth presented here.)

Given that the State is currently in an ongoing housing crisis due to an insufficient housing supply, the additional units under the 2040 General Plan would further assist in addressing the existing crisis and meeting the housing needs of San Ramon communities.

The increase in affordable housing units would provide housing opportunities in proximity to jobs for those employed in Contra Costa County that earn below median household income categories. Most of those employed in San Ramon commute from areas outside San Ramon and affordable housing units would provide for a better balance of jobs and housing in the region.

As shown on Table 3.9-4, San Ramon has a current jobs-household ratio of 1.8; this means that there are not enough households in San Ramon to support employment opportunities and that workers must commute to San Ramon. Growth facilitated by the 2040 General Plan would result in a more balanced jobs-household ratio by 2040 by increasing the number of residential units available in San Ramon (Table 3.9-4). Therefore, such growth would not result in substantial adverse effects associated with an increased imbalance of jobs and housing in San Ramon.

The following 2040 General Plan Land Use Element, Housing Element, and Growth Management Element policies would encourage integration of development into surrounding neighborhoods and existing land use patterns, increasing the orderly nature of growth facilitated by the 2040 General Plan:

LAND USE ELEMENT

Policy 4.6-I-1 Continue to maintain an Urban Growth Boundary (UGB), as shown on the General Plan Diagram that limits the extent of urban development and services within the San Ramon Planning Area. Amendments to the Urban Growth Boundary greater than 25 acres require City voter approval.

Policy 4.8-I-16 Continue to refine urban design standards in the Zoning Ordinance as needed for large-scale office development to promote smart growth principles while minimizing negative impacts on adjacent properties.

HOUSING ELEMENT

Policy IP 11.5.4-1 Utilize the Urban Growth Boundary as a tool to focus the provision of diverse housing options through infill housing development projects near employment, shops/services, and transportation corridors; particularly within the City's core and Priority Development Areas.

GROWTH MANAGEMENT ELEMENT

Policy 3.3.1-7 Allow urban development only within the City's Urban Growth Boundary (see Implementing Policies 4.6-I-1 through 4.6-I-5) and only in accord with a plan for full urban services (police, fire, parks, water, sanitation, streets and storm drainage) to which all providers are committed.

Finally, one purpose of the 2040 General Plan is to direct future development in such a way as to minimize the impacts of growth by emphasizing the intensification and reuse of already developed areas, thus minimizing pressure to develop on the remaining open space in San Ramon and directing growth and development to infill areas. Because the 2040 General Plan is designed for planned and orderly growth, and residential development would be completed in accordance with State law, development facilitated by and in accordance with the 2040 General Plan would not directly or indirectly induce substantial unplanned growth in San Ramon. Therefore, operational 2040 General Plan impacts related to substantial unplanned population growth would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

Less than significant without mitigation

Population or Housing Displacement

Significance Criterion d:	Would the proposed plan displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Impact LU-4 **DEVELOPMENT FACILITATED BY THE PROPOSED PLAN WOULD NOT RESULT IN THE DISPLACEMENT OF SUBSTANTIAL NUMBERS OF HOUSING OR PEOPLE. THE PROPOSED PLAN WOULD FACILITATE THE DEVELOPMENT OF NEW HOUSING IN ACCORDANCE WITH STATE AND LOCAL HOUSING REQUIREMENTS, WHILE PRESERVING EXISTING RESIDENTIAL NEIGHBORHOODS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.**

Construction

Impacts related to displacement of substantial existing people or housing are limited to operational impacts. No respective construction impacts related to population or housing displacement would occur from development facilitated by the proposed plan.

Operation

2040 GENERAL PLAN

"Substantial" displacement would occur if allowed land uses would displace more residences than would be accommodated through growth facilitated by the 2040 General Plan. The 2040 General Plan would accommodate new development in the General Plan area under land use designations that encourages higher-density and mixed-use projects. Full buildout of the 2040 General Plan would result in 10,155 net new housing units by 2040. The types of housing units anticipated under the 2040 General Plan would generally fall into the following categories of development projects:

single-family, multi-family residential, and/or mixed-use development, development of existing nonresidential, and residential sites that would allow residential use or higher density residential use.

Development in the General Plan area would not result in significant displacement of existing residences in order to accommodate the planned increase in development intensity considering that existing residences are not proposed for demolition. In addition, the 2040 General Plan would facilitate the development of 10,155 net new dwelling units throughout the General Plan area. As such, the 2040 General Plan would not result in the net loss or displacement of housing, necessitating the construction of replacement housing elsewhere. Therefore, operational 2040 General Plan impacts related to population or housing displacement would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

Less than significant without mitigation

3.9.5 Cumulative Impacts

The geographic scope of the cumulative land use/planning and population/housing analysis is the City of San Ramon and adjacent other city and County planning areas. The cumulative analysis considers the nearby past, present, and reasonably foreseeable future projects located in San Ramon (in addition to the proposed plan) listed in Table 3-1 (refer to Chapter 3, Environmental Impact Analysis), as well as plans in the City of Danville and unincorporated Contra Costa County, and Plan Bay Area 2050.

Community Division

Development facilitated by the proposed plan in conjunction with the cumulative plans and projects listed in Table 3-1 would result in the development of residential, retail, office, hotel, industrial, and transportation uses. The cumulative plans and projects do not propose the type of large or linear construction that could reduce mobility within an existing community and the surrounding area and would occur in an urban environment. Therefore, the cumulative impact related to potential to divide an existing community would be less than significant.

Land Use Plan, Policy, or Regulation Consistency

Land use decisions for both the proposed plan and for the other cumulative plans and projects listed in Table 3-1 are made at the City level. Development within the City of San Ramon is governed by the San Ramon General Plan and San Ramon Municipal Code, which ensure logical and orderly land use development and require discretionary review to ensure that projects do not result in land use environmental impacts due to inconsistency with the General Plan and other regulations such as the Zoning Ordinance. Cumulative development projects in San Ramon would be required to demonstrate consistency with the proposed 2040 General Plan and applicable codes, ordinances, and policies. This would ensure that these projects comply with applicable planning regulations. The proposed plan has been determined to be consistent with the City's policy. Therefore, the cumulative impact related to potential conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect would be less than significant.

Population Growth

Cumulative projects listed in Table 3-1 in conjunction with the proposed plan would add residents to the Cities of San Ramon, Danville, unincorporated Contra Costa County, and the greater Bay Area. The CDF estimates that the total population of San Ramon was 83,820 as of January 1, 2022.[10] The development of other cumulative plans and projects include residential projects that would add additional housing units resulting in additional residents. This increase in population would be in addition to the approximately 26,269 residents associated with the proposed plan. The proposed plan estimates San Ramon at buildout to have a population of 110,089 people by 2040. Because the proposed plan is designed for planned and orderly growth, and residential development would be completed in accordance with State law, development facilitated by and in accordance with the proposed plan would not directly or indirectly induce substantial unplanned growth in San Ramon. As such, while other cumulative plans and projects would result in direct population growth, implementation of the proposed plan, in conjunction with other cumulative projects, would result in a less than significant cumulative impact associated with direct population growth, as this growth is planned for by the City of San Ramon. Furthermore, cumulative plans and projects are expected to generate employment opportunities. Total employment in San Ramon was 54,000 in 2022. The cumulative plans and projects are estimated to increase employment, and the proposed plan is expected to increase jobs in San Ramon by 18,000. Employees associated with the cumulative plans and projects would be expected to be drawn from the local and regional labor force. As such, there would not be substantial indirect population growth associated with implementation of the cumulative plans and projects. Therefore, cumulative impacts related to direct and indirect population growth would be considered less than significant.

Population/Housing Displacement

Cumulative plans and projects listed in Table 3-1 in conjunction with implementation of the proposed plan would add residential units to San Ramon. The plans and projects listed in Table 3-1 would not remove existing housing and rather would add housing units. Furthermore, the development facilitated by the proposed plan would add approximately 10,155 housing units to the San Ramon housing stock. In addition, implementation of the proposed plan would not require the removal of any homes and would not displace any people. As such, implementation of the proposed plan, in conjunction with other cumulative plans and projects, would not displace housing or people such that it would necessitate the construction of additional housing elsewhere. Therefore, no cumulative impact related to displacement of housing or people would occur.

Overall Level of Cumulative Significance

Less than significant

[10] CDF. 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State 2010-2021. Available: <https://dof.ca.gov/Forecasting/Demographics/Estimates/>. (accessed March 2023)

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3.10 Noise

3.10.1 Introduction

This section describes the existing conditions related to noise and vibration within the General Plan area as well as the regulatory framework. This section also evaluates the possible impacts related to noise and vibration that could result from implementation of the 2040 General Plan. Information included in this section is based on the 2040 San Ramon General Plan, transportation volume data drawn from the San Ramon 2040 General Plan Transportation Impact Assessment (TIA) report, which is included as Appendix E to this EIR, and noise calculation outputs included as Appendix D to this EIR.

3.10.2 Environmental Setting

Characteristics of Noise

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment.[1] Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000 Hertz and less sensitive to frequencies around and below 100 Hertz. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of roadway vehicle volume, would increase the noise level by 3 dBA; reducing the energy in half would result in a 3 dBA decrease.[2] Table 3.10-1 shows some representative noise sources and their corresponding noise levels in dBA.

Table 3.10-1 Typical A-Weighted Noise Levels

Indoor Noise Source	Noise Level (dBA)	Outdoor Noise Sources
(Threshold of Hearing in Laboratory)	0	—
Library	30	Quiet Rural Nighttime
Refrigerator Humming	40	Quiet Suburban Nighttime
Quiet Office	50	Quiet Urban Daytime
Normal Conversation at 3 feet	60	Normal Conversation at 3 feet
Vacuum Cleaner at 10 feet	70	Gas Lawn Mower at 100 feet
Hair Dryer at 1 foot	80	Freight Train at 50 feet
Food Blender at 3 feet	90	Heavy-duty Truck at 50 feet
Inside Subway Train (New York)	100	Jet Takeoff at 2,000 feet
Smoke Detector Alarm at 3 feet	110	Unmuffled Motorcycle

[1] California Department of Transportation (Caltrans). 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. (CT-HWANP-RT-13-069.25.2) September. Available at: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf (accessed March 2023).
[2] Crocker, Malcom. 2007. *Handbook of Noise and Vibration Control Book*, ISBN: 978-0-471-39599-7, Wiley-VCH, October.

Indoor Noise Source	Noise Level (dBA)	Outdoor Noise Sources
Rock Band near stage	120	Chainsaw at 3 feet
—	130	Military Jet Takeoff at 50 feet
—	140	(Threshold of Pain)

Source: Data compiled by Rincon in 2023.

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not "sound twice as loud" as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible; and that an increase (or decrease) of 10 dBA sounds twice (or half) as loud.

Sound changes in both level and frequency spectrum as it travels from the source to the receptor. The most obvious change is the decrease in level as the distance from the source increases. The manner in which noise reduces with distance depends on factors such as the type of sources (e.g., point or line, the path the sound will travel, site conditions, and obstructions). Noise levels from a point source typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance (e.g., construction, industrial machinery, ventilation units). Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance. The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site, such as a parking lot or smooth body of water, receives no additional ground attenuation and the changes in noise levels with distance (drop-off rate) result from simply the geometric spreading of the source. An additional ground attenuation value of 1.5 dBA per doubling of distance applies to a soft site (e.g., soft dirt, grass, or scattered bushes and trees). Noise levels may also be reduced by intervening structures. The amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, and man-made features such as buildings and walls, can substantially alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receptor.[3] Structures can substantially reduce exposure to noise as well. The FHWA's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important factors of project noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. One of the most frequently used noise metrics is the equivalent noise level (L_{eq}); it considers both duration and sound power level. L_{eq} is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time. Typically, L_{eq} is summed over a one-hour period. L_{max} is the highest root mean squared (RMS) sound pressure level within the sampling period, and L_{min} is the lowest RMS sound pressure level within the measuring period.

Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{dn}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime (10:00 p.m. to

[3] Federal Highway Administration (FHWA). 2011. *Highway Traffic Noise: Analysis and Abatement Guidance.* (FHWAHEP-10-025). December. Available at: https://www.codot.gov/programs/environmental/noise/assets/fhwa-noise-guidance-dec-2011 (accessed March 2023).

7:00 a.m.) hours; it is also measured using Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. Noise levels described by L_{dn} and CNEL usually differ by about 1 dBA or less. The relationship between the peak-hour L_{eq} value and the L_{dn}/CNEL depends on the distribution of roadway noise during the day, evening, and night. Quiet suburban areas typically have CNEL noise levels in the range of 40 to 50 dBA, while areas near arterial streets are in the 50 to 60-plus CNEL range. Normal conversational levels are in the 60 to 65-dBA L_{eq} range; ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations.[4]
Table 3.10-2 briefly defines measurement descriptors and other sound terminology used in this section.

Table 3.10-2 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.
Ambient Noise	The composite of noise from all sources near and far in a given environment.
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 10:00 p.m. and 7:00 a.m. (nighttime).
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 7:00 p.m. and 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring between 10:00 p.m. and 7:00 a.m.

Source: Data compiled by Rincon in 2023.

Characteristics of Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. The number of cycles per second of oscillation makes up the vibration frequency, described in terms of Hertz. The frequency of a vibrating object describes how rapidly it oscillates. The normal frequency range of most groundborne vibration that can be felt by the human body is from a low of less than 1 Hertz up to a

[4] Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment*. November. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed March 2023).

high of about 200 Hertz.[5] Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration.

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as groundborne noise. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hertz), or when foundations or utilities, such as sewer and water pipes, physically connect the structure and the vibration source.[6]

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High-frequency vibrations diminish much more rapidly than low frequencies, so low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances.[7] When a building is impacted by vibration, a ground-to-foundation coupling loss will usually reduce the overall vibration level. However, under rare circumstances, the ground-to-foundation coupling may amplify the vibration level due to structural resonances of the floors and walls.

Vibration amplitudes are usually expressed in peak particle velocity (PPV). The PPV is normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of blasting vibration and other construction activity because it is related to the stresses that are experienced by buildings.[8] Table 3.10-3 summarizes the vibration damage criteria recommended by the FTA for evaluating the potential for architectural damage to buildings.

Table 3.10-3 Criteria for Vibration Damage Potential

Building Category	PPV (in/sec)
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

in/sec = inches per second; PPV = peak particle velocity

Source: Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment*. November. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed March 2023).

[5] Crocker, Malcolm J. (Editor). 2007. Handbook of Noise and Vibration Control Book. ISBN: 978-0-471-39599-7, Wiley-VCH. October 2007.
[6] Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment*. November. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed March 2023).
[7] Caltrans. 2020 *Transportation and Construction Vibration Guidance Manual*. (CT-HWANP-RT-20-365.01.01) September. Available at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf (accessed March 2023).
[8] Caltrans. 2020 *Transportation and Construction Vibration Guidance Manual*. (CT-HWANP-RT-20-365.01.01) September. Available at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf (accessed March 2023).

Noise-Sensitive Land Uses

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Noise-sensitive land uses are typically defined as single and multi-family residential; hotels and motels; group homes, hospital and extended medical facilities; churches; schools and other learning institutions; and libraries. Sensitive land uses generally should not be subjected to noise levels that would be considered intrusive in character.

General Plan Area

Noise-sensitive land uses are located throughout San Ramon, as it is a predominantly residential community. Residential development is located between the western boundary of San Ramon Planning Area and I-680, east of I-680 between Bollinger Canyon Road and the southern City limit, and east of Alcosta Boulevard to the eastern boundary of the San Ramon Planning Area. San Ramon also includes noise-sensitive land uses such as hotels and motels; group homes; churches; schools and other learning institutions; and libraries.

Existing Noise Conditions and Sources

General Plan Area

The predominant source of noise in San Ramon, as in most communities, is motor vehicles. Motor vehicle noise is characterized by a high number of individual events that can create a sustained noise level in proximity to noise-sensitive uses. Roadways with the highest roadway vehicle volumes and speeds produce the highest noise levels. The roadways in San Ramon with the highest roadway vehicle volumes and, thus, the highest noise levels, include Crow Canyon Road, Bollinger Canyon Road, and Dougherty Road. Table 3.10-4 provides existing roadway vehicle noise along roadways in the General Plan area.

Table 3.10-4 Existing Roadway Vehicle Noise Along Roadway Segments

Roadway	Segment	Existing ADT	Existing Roadway Vehicle Noise Level at 50 feet (dBA L_{dn})
Crow Canyon Road	Between Bollinger Canyon Road and San Ramon Valley Boulevard	16,445	67.4
Crow Canyon Road	Between San Ramon Valley Boulevard and Crow Canyon Place	35,037	71.4
Crow Canyon Road	Between San Ramon Valley Boulevard and Crow Canyon Place	30,770	70.4
Crow Canyon Road	Between San Ramon Valley Boulevard and Crow Canyon Place	23,063	68.4
Bollinger Canyon Road	Between San Ramon Valley Boulevard and Sunset Drive/Chevron Drive	45,293	71.3
Bollinger Canyon Road	Between Sunset Drive/Chevron Drive and Alcosta Boulevard	36,284	71.1
Bollinger Canyon Road	Between Alcosta Boulevard and Dougherty Road (N)	33,359	70.7
Bollinger Canyon Road	Between Dougherty Boulevard (N) and Dougherty Road (S)	15,115	67.1

Roadway	Segment	Existing ADT	Existing Roadway Vehicle Noise Level at 50 feet (dBA L_{dn})
Dougherty Road	Between Crow Canyon Place and Bollinger Canyon Road (N)	18,508	70.1
Dougherty Road	Bollinger Canyon Road (N) and Bollinger Canyon Road (S)	11,793	68.6
Dougherty Road	Between Bollinger Canyon Road (S) and City Limit	24,244	71.8
San Ramon Valley Boulevard	Between City Limit and Crow Canyon Road	16,161	66.5
San Ramon Valley Boulevard	Between Crow Canyon Road and Norris Canyon Road	19,041	67.2
San Ramon Valley Boulevard	Between Norris Canyon Road and Bollinger Canyon Road	12,252	65.3
San Ramon Valley Boulevard	Between Bollinger Canyon Road and Alcosta Boulevard	12,548	64.2
Norris Canyon Road	Between City Limit and Bollinger Canyon Road	4,729	57.3
Norris Canyon Road	Between Bollinger Canyon Road and San Ramon Valley Boulevard	4,986	57.5
Norris Canyon Road	Between San Ramon Valley Boulevard and Alcosta Boulevard	10,579	64.8
Camino Ramon	Between Fostoria Way and Crow Canyon Road	11,921	64.7
Camino Ramon	Between Crow Canyon Road and Norris Canyon Road	14,234	65.7
Camino Ramon	Between Norris Canyon Road and Bollinger Canyon Road	9,380	63.9

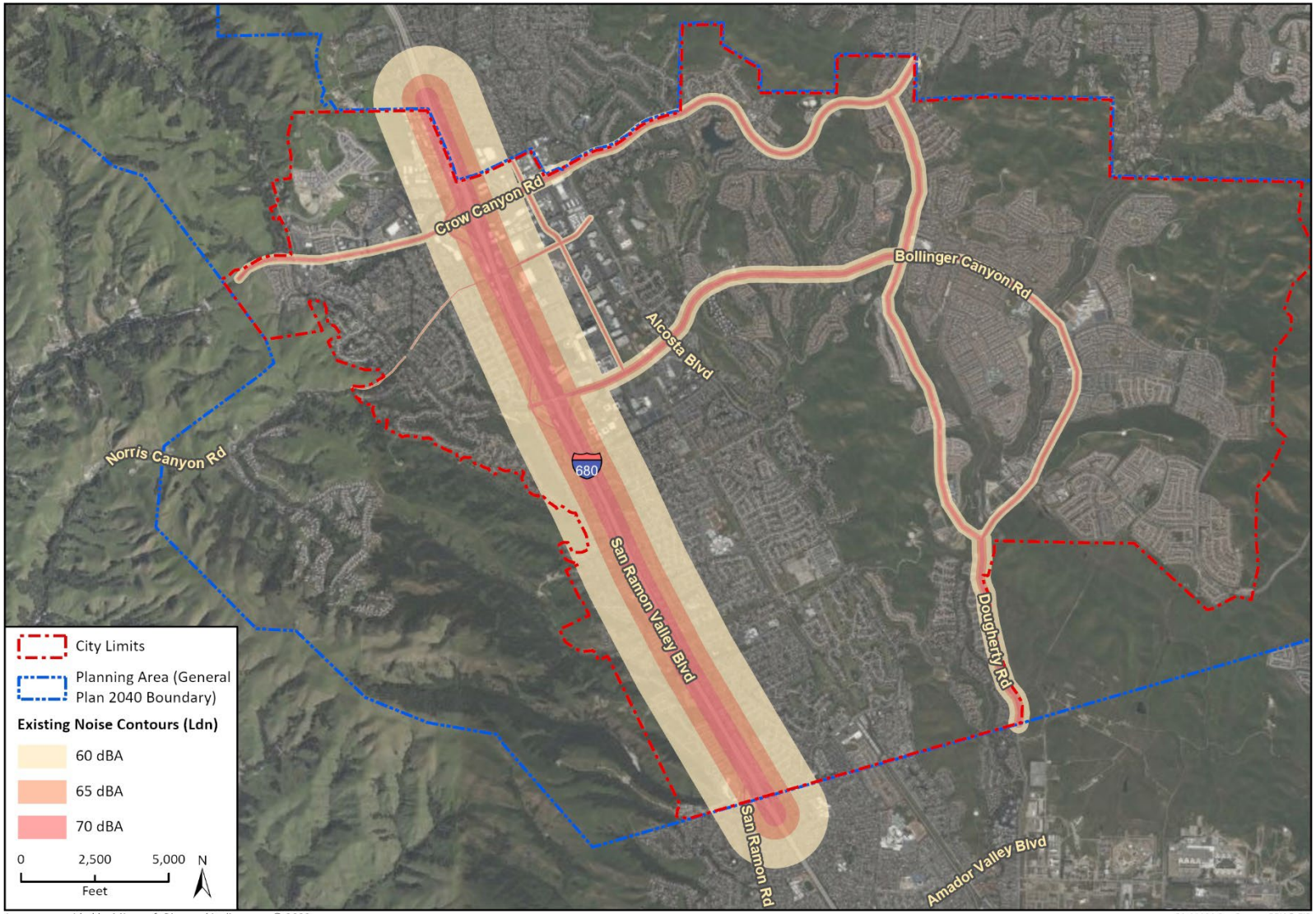
ADT = average daily trips

Source: Roadway vehicle volume data provided by Fehr & Peers in 2023 – see Appendix E. Rincon calculated roadway vehicle noise levels using the FHWA roadway vehicle noise prediction model methodology – see Appendix D.

Figure 3.10-1 shows the existing 60, 65, and 70 dBA L_{dn} noise contours[9] from major roadways and highways in the General Plan area.

[9] Noise contours are lines drawn about a noise source, such as roadways, highways, or airports, indicating levels of noise exposure generated by the noise source.

Figure 3.10-1 Existing Roadway Vehicle Noise Contours in General Plan Area



3.10.3 Regulatory Framework

Federal Regulations

Department of Housing and Urban Development

The federal Department of Housing and Urban Development (HUD) sets environmental criteria and standards in Title 24 of the Code of Federal Regulations (CFR), Part 51. New construction proposed in areas that exceed 65 dBA L_{dn} must incorporate noise attenuation features to maintain interior noise levels at 45 dBA L_{dn}. Development in areas exceeding 65 dBA L_{dn} requires further attenuation features. In general, the HUD regulations match the California state regulations discussed below.

Federal Transit Administration

The FTA provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction in their *Transit and Noise Vibration Impact Assessment Manual* (FTA 2018). For residential uses, the daytime noise threshold is 80 dBA L_{eq} for an 8-hour period.

Occupational Health and Safety Administration

The federal government regulates occupational noise exposure common in the workplace through the Occupational Health and Safety Administration (OSHA) under the EPA. Noise limitations would apply to the operation of construction equipment and could also apply to any proposed industrial land uses. Noise exposure of this type is dependent on work conditions and is addressed through a facility's Health and Safety Plan, as required under OSHA, and is not addressed further in this analysis.

State Regulations

California General Plan Guidelines

State law requires general plans to include a Noise Element under Government Code Section 65302(f). The California General Plan Guidelines, published by the Governor's Office of Planning and Research, indicate acceptable, specific land use types in areas with specific noise exposure. The guidelines also offer adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution. These guidelines are advisory, and local jurisdictions have the authority to set specific noise standards based on local conditions.

California Building Code

California Code of Regulations Title 24, Building Standards Administrative Code, Part 2, Chapter 12, and the California Building Code codify the State noise insulation standards. These noise standards apply to new construction in California to control interior noise levels as they are affected by exterior noise sources and interior noise sources from separate areas. The regulations specify that interior noise levels shall not exceed 45 dB CNEL/L_{dn} in any habitable room, as well as specifying sound transmission class requirements for walls, floors, and ceilings around sleeping units.

California Green Building Code

California Green Building Standards Code 2022 (CALGreen) Section 5.507.4, Acoustical Control, regulates construction of non-residential uses within the 65 dBA CNEL/L_{dn} contour of an airport, freeway, expressway, railroad, industrial noise source, or other fixed source. According to Section 5.507.4.1.1 "buildings exposed to a noise level of 65 dB L_{eq}(1-hr) during any hour of operation shall employ sound-resistant assemblies as determined by a prescriptive method (CALGreen Section 5.507.4.1) or performance method (CALGreen Section 5.507.4.2).

Projects may demonstrate compliance through the prescriptive method if wall and roof-ceiling assemblies exposed to the noise source meet a composite sound transmission class (STC) rating of at least 50 or a composite outdoor/indoor transmission class (OITC) rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30. Projects may demonstrate compliance through the performance method if wall and roof-ceiling assemblies exposed to the noise source are constructed to provide an interior noise environment that does not exceed 50 dB $L_{eq\text{-}1Hr}$ in occupied areas during hours of operations.

Local Regulations

San Ramon General Plan

The current San Ramon General Plan contains land use compatibility categories for community noise exposure, noise contour maps, and policies related to noise, but the categories for noise exposure, noise contour maps, and policies would be replaced by the proposed 2040 General Plan.

San Ramon Municipal Code

Division B6, Chapter V of the San Ramon Municipal Code contains a noise ordinance. Relevant sections in the noise ordinance include the following:

- **B6-83. Standards for determination of violation.** Notwithstanding any other provision of this chapter, it is unlawful for a person to willfully make or continue, or cause to be made or continued, a loud, unnecessary or unusual noise which disturbs the peace or quiet of a neighborhood, or which causes discomfort or annoyance to a reasonable person residing in the area. The standards which shall be considered in determining whether a violation of this section exists shall include, but are not limited to, the following:
  A. Volume of the noise;
  B. Whether the nature of the noise is usual or unusual;
  C. Proximity of the noise to residential sleeping facilities;
  D. Nature and zoning of the area within which the noise emanates;
  E. Time of day or night the noise occurs;
  F. Duration of the noise;
  G. Whether the noise is recurrent, intermittent or constant; and
  H. Whether the noise is produced by a commercial or noncommercial activity.
- **B6-94. Noise adjacent to schools, hospitals, or churches.** It is unlawful for a person to create noise on a street, sidewalk or public place adjacent to a school or church while in use or adjacent to a hospital, which noise unreasonably interferes with the working of the institution or which disturbs or unduly annoys a patient in the hospital.

- **B6-97. Machinery or air conditioning equipment.** It is unlawful for a person to operate machinery, equipment, pump, fan, air conditioning apparatus or similar mechanical device used for commercial purposes in the manner which creates noise, unless the noise is muffled and the device is equipped with a muffler sufficient to deaden the noise.
- **B6-100. Construction projects.** It is unlawful for a person within a residential land use district to operate or perform construction or repair work on a building, structure or project, or to operate a pile driver, steam shovel, pneumatic hammer, derrick, steam or electric hoist or other construction-type device on holidays celebrated by the federal government, and on Monday through Friday, prior to seven-thirty a.m. and after seven p.m. on each day and on Saturdays and Sundays, prior to nine a.m. and after six p.m.
- **B6-101. Business and residential relationships.**
  A. Store deliveries by any vehicle in the area between the business and residences is prohibited between ten p.m. and six-thirty a.m. weekdays and between ten p.m. and eight a.m. on weekends and federal holidays. Delivery vehicles will have their engines turned off during deliveries.
  B. Construction and maintenance by power equipment in the area between the business and residences is prohibited between ten p.m. and six-thirty a.m. weekdays and between ten p.m. and eight a.m. on weekends and federal holidays.
  C. Pedestrian, cycle or unauthorized vehicle traffic in the area between the business and residences is prohibited between ten p.m. and eight a.m.
  D. Collection of Solid Waste, Organic Materials, or Recyclable Materials from residential properties and from commercial properties that are 200 feet or less from residential properties is prohibited between the hours of seven p.m. and five-thirty a.m.

San Ramon Zoning Code

The San Ramon Zoning Code contains performance levels for noise. Relevant sections in the zoning ordinance include the following:

- D2-15 (b**)** In the CCMU and MU zones, the following requirement shall apply: **Noise.** Each residential unit shall be designed and constructed to minimize adverse impacts from nonresidential project noise, in compliance with the City's Noise Ordinance.
- D3-8 (D) Dust. Activities that may generate dust emissions (e.g., commercial gardening, construction, grading, and similar operations) shall be conducted to limit the emissions beyond the site boundary to the maximum extent feasible. Recycled water shall be used unless it is not available, not feasible (additional cost is not the primary determination regarding feasibility), or if there is an environmental concern (e.g. adjacent to a creek, protected habitat, etc.) as determined by the Zoning Administrator. Recycled water shall also be utilized for other construction-related activities, including but not limited to washing equipment, and street cleaning, in compliance with all applicable regulations and permits, including the City's Storm Water Permit. The Zoning administrator, in determining feasibility of the use of recycled water shall look at the availability of reclaimed water, distance of transportation, impacts of transit on the road system, site specific constraints, and scale of development. Appropriate methods of dust management shall include the following, subject to approval by the City Engineer and/or Building Official. 1. Scheduling. Grading shall be designed and grading activities shall be scheduled to ensure that repeat grading will not be required, and that completion of the dust-generating activity (e.g., construction, paving, or planting) will occur as soon as possible. 2.

Limited hours for grading. Grading operations shall occur only between the hours of 7:00 a.m. and 7:00 p.m. to the extent feasible, consistent with the City's Grading Ordinance, and noise levels shall not exceed those allowed by the City's Noise Ordinance. The hours for grading operations may be further restricted when determined by the Zoning Administrator or the City Engineer to be necessary because of the proximity of dust- and noise-sensitive uses. 3. Operations during high winds. Clearing, earth-moving, excavation operations, or grading activities shall cease when the wind speed exceeds 25 miles per hour averaged over one hour. 4. Limiting the area of disturbance. The area disturbed by clearing, demolition, earth-moving, excavation operations, or grading shall be minimized at all times. 5. Dust control. Dust emissions shall be controlled by a combination of the following: a. Watering on-site construction roads a minimum of twice a day; b. Paving or use of other treatments of permanent on-site roads c. Covering of truck loads to contain dust sources d. Use of other dust

- D3-8 (E) Ground vibration. No activity, process, or use shall generate ground vibrations that are perceptible without instruments by a reasonable person at the property lines of the subject site.

3.10.4 Impacts and Mitigation Measures

Significance Criteria

The City of San Ramon utilizes the following 2022 *CEQA Guidelines* Appendix G significance criteria questions related to Noise.

Would the 2040 General Plan:

a) 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?
b) Generate excessive groundborne vibration or groundborne noise levels?
c) If 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, expose people residing or working in the project area to excessive noise levels?

Approach to Analysis

Construction Noise

Construction noise levels that could occur with implementation of the 2040 General Plan are based on reference noise levels published by the FTA.

Stationary On-Site Operational Noise

Stationary noise (i.e., on-site operational noise) were analyzed in context of typical mechanical equipment on commercial, industrial, residential and mixed-use development such as heating, ventilation, and air conditioning (HVAC) units.

Mobile Off-site Operational Noise

Roadway vehicle noise levels for the 2040 General Plan were estimated using the FHWA roadway vehicle noise prediction model methodology. Roadway vehicle noise impacts are analyzed based on average daily trip (ADT) roadway volume for existing conditions and General Plan 2040 Buildout, as well as speeds, and number of lanes data provided by Fehr & Peers. The FHWA model predicts noise

levels through a series of adjustments to a reference sound level. These adjustments account for distances from the roadway, roadway vehicle volumes, vehicle speeds, car/truck mix, number of lanes, and road width.

Groundborne Vibration

Development facilitated under the 2040 General Plan would not include substantial vibration sources associated with operation. Construction activities have the greatest potential to generate groundborne vibration affecting nearby noise-sensitive receptors. Construction vibration levels that could occur due to buildout of the 2040 General Plan are based on reference vibration levels published by the FTA.

EIR Scoping Comments Consideration

No comments relevant to CEQA were received in response to the EIR NOP specific to noise and vibration that need to be addressed in the impacts discussion.

Specific Thresholds of Significance

For purposes of this analysis, the following thresholds of significance are used to evaluate the significance of noise and vibration resulting from implementation of the proposed plan.

Construction Noise

Development facilitated by the 2040 General Plan could have a significant impact if temporary construction noise during permitted daytime hours exposed noise-sensitive receptors to significantly adverse noise levels, if construction noise occurred outside the hours detailed in Municipal Code Section B6-100, or if construction activities occurred for longer than typical duration (i.e., more than two years). As the Municipal Code does not define a quantitative construction noise threshold, for purposes of analyzing impacts from development facilitated by the 2040 General Plan, the City has determined that the FTA construction criteria are applicable to the 2040 General Plan. The FTA provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction in their *Transit and Noise Vibration Impact Assessment Manual*.[10] For residential uses, the daytime noise threshold is 80 dBA $L_{eq(8hr)}$ for an 8-hour period. Construction noise would be significant if it exceeds this threshold.

Stationary On-site and Mobile Off-site Operational Noise

In lieu of City-specific standards and for the purposes of this analysis, the previous San Ramon General Plan thresholds of significance for stationary on-site and mobile off-site operational noise is used. A significant increase in ambient noise levels is assumed if the project causes ambient noise levels to exceed the following:

- The ambient noise level is less than 60 dB L_{dn} and a project increases noise levels by 5 dB or more.
- The ambient noise level is 60-65 dB L_{dn} and a project increases noise level by 3 dB or more.
- The ambient noise level is greater than 65 dB L_{dn} and a project increases noise levels by 1.5 dB or more.

[10] Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment*. November. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed March 2023).

Exposure to Aircraft Noise

For a plan or 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, if the plan or project exposes people residing or working in the project area to excessive noise levels such as noise levels exceeding normally acceptable noise levels in the 2040 General Plan, impacts would be significant.

Vibration

The City has not adopted a significance threshold to assess vibration impacts during construction and operation. Therefore, criteria from the FTA are used to evaluate potential construction vibration impacts related to potential building damage from construction.[11] Construction vibration impacts from development would be significant if vibration levels exceed the FTA criteria shown in Table 3.10-3 above.

Impact Evaluation

Significance Criterion a:	Would the proposed plan 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?

Impact NOI-1 CONSTRUCTION OF INDIVIDUAL PROJECTS FACILITATED BY THE 2040 GENERAL PLAN WOULD TEMPORARILY INCREASE NOISE LEVELS, POTENTIALLY AFFECTING NEARBY NOISE-SENSITIVE LAND USES. DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD ALSO INTRODUCE NEW NOISE SOURCES AND CONTRIBUTE TO INCREASES IN OPERATIONAL NOISE. THE CONTINUED REGULATION OF NOISE, CONSISTENT WITH THE CITY CODE, IMPLEMENTATION OF PROPOSED 2040 GENERAL PLAN POLICIES, AND IDENTIFIED MITIGATION WOULD MINIMIZE DISTURBANCE TO ADJACENT LAND USES. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Construction

Noise from individual construction projects facilitated by the 2040 General Plan would temporarily increase noise levels at nearby noise-sensitive receptors. Since at this stage of planning, project-level details are not available for future projects that would be carried out under the 2040 General Plan, it is not possible to determine exact noise levels, locations, or time periods for construction of such projects, or construction noise at adjacent properties. However, noise estimates for typical construction activities have been provided below.

Construction activities would generate noise from phases such as demolition, site preparation, grading, building construction, and paving activities. Each phase of construction has a specific equipment mix and associated noise characteristics, depending on the equipment used during that phase. Construction noise would typically be higher during the more equipment-intensive phases of initial construction (i.e., demolition, site preparation, and grading work) and would be lower during the later construction phases (i.e., building construction and paving). Table 3.10-5 illustrates typical noise levels associated with construction equipment at a distance of 50 feet and 100 feet.

[11] Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment*. November. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed April 2023).

Table 3.10-5 Typical Noise Levels for Construction Equipment

Equipment	Estimated Noise Levels at Nearest Sensitive Receptors (dBA L_{eq})	
	50 feet	100 feet
Air Compressor	80	74
Backhoe	80	74
Concrete Mixer	85	79
Dozer	85	79
Grader	85	79
Jack Hammer	88	82
Loader	80	74
Paver	85	79
Pile-drive (Impact)	101	95
Pile-driver (Sonic)	95	89
Roller	85	79
Saw	76	70
Scarified	83	77
Scraper	85	79
Truck	84	78

Source: Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment*. November. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed March 2023).

Neither the San Ramon Municipal Code nor the 2040 General Plan contain quantitative limits for construction noise. In lieu of City-specific standards, the FTA criteria for assessing construction noise impacts are used. For residential uses, the FTA daytime noise threshold is 80 dBA $L_{eq\ (8\ hour)}$ for an 8-hour period.

Noise would typically drop off at a rate of about 6 dBA per doubling of distance. Therefore, noise levels would be about 6 dBA lower than shown in Table 3.10-5 at 200 feet from the noise source and 12 dBA lower at a distance of 400 feet from the noise source. As shown in these noise levels, construction noise may exceed the FTA's daytime noise threshold, depending on the equipment used and the distance in which the equipment is operating compared to noise-sensitive receptors.

The following proposed General Plan 2040 Noise Element goal and policy would minimize noise-related impacts from construction activities.

Goal 10.1-G-1 Achieve an acceptable noise environment for the present and future residents of San Ramon.

Policy 10.1-I-14 Construction activities are exempt from the standards set forth in Figure 10-2, but must implement all practical noise attenuation measures and practices to limit adverse impacts on nearby land uses.

Implementation of Policy 10.1-I-14 would reduce noise from construction activities with implementation of noise attenuation measures. However, since at this stage of planning, project-level details are not available for future projects that would be facilitated by the 2040 General Plan, it is not possible to determine exact noise levels, locations, or time periods for construction of such projects, or construction noise at adjacent properties. Therefore, construction noise levels associated with future projects may exceed the FTA's daytime construction noise limits, and impacts would be potentially significant.

Implementation of Mitigation Measure NOI-1 would reduce 2040 General Plan construction noise impacts associated with future discretionary projects in San Ramon to below the significance threshold of 80 dBA L_{eq} during the daytime at residential uses and other sensitive receptors in all cases. Therefore, the 2040 General Plan construction noise impact would be less than significant with mitigation.

Operation

STATIONARY OPERATIONAL NOISE

Stationary sources of noises may occur on all types of land uses. Residential uses would generate noise from landscaping, maintenance activities, and mechanical equipment such as ground-level and rooftop ventilation and heating (HVAC) systems. Commercial uses would generate noise from HVAC systems, loading docks, and other sources. Other noise generated by residential or commercial uses such as conversations and parking lot activity is generally short and intermittent. Nightclubs, outdoor dining areas, gas stations, car washes, fire stations, drive-throughs, swimming pool pumps, school playgrounds, athletic and music events, and public parks are other common noise sources. The proposed Noise Element contains guiding policies and implementing policies that require local planning and development decisions to consider noise-related impacts from stationary sources.

2040 General Plan Noise Element Goal 10.1-G-1 and the following associated policies would minimize potential adverse noise-related impacts from stationary sources.

Policy 10.1-I-1 Minimize vehicular noise sources, stationary noise sources, and noise emanating from intermittent activities.

Policy 10.1-I-2 All projects where people are exposed to noise greater than "normally acceptable" levels indicated in Figure 10-2 shall be required to submit a noise analysis. Applicable Noise attenuation measures shall be implemented with the DNL reduced to 45 Db in all habitable rooms.

Policy 10.1-I-3 Require all necessary acoustical and vibration studies be prepared by qualified professionals in accordance with industry-accepted methodology. All applicable and feasible vibration reduction measures shall be incorporated into projects.

Policy 10.1-I-4 Alternatives to sound walls such as building orientation and landscaped buffers shall be considered during the design process. If deemed appropriate, sound walls with factors such as height, decorative features, graffiti resistance, pedestrian mobility, and sight distances shall be considered.

Policy 10.1-I-5 New development shall minimize their noise impacts on adjacent properties through appropriate means, including, but not limited to, the following actions:

- Screen and control noise sources, such as parking and loading facilities, outdoor activities and mechanical equipment,
- Increase setbacks for noise sources from adjacent dwellings,
- Retain or install fences, walls, and landscaping that serve as noise buffers,
- Use soundproofing materials and other building practices or materials,
- Encourage the use of commute alternatives,
- Control hours of operation, including deliveries and trash pickup, to minimize noise impacts, and
- Buffer noise along highways and arterial roadways through natural noise buffers and if necessary, install sound walls when compatible with neighborhood aesthetics and character.

Policy 10.1-I-6 Protect sensitive receptors such as schools, hospitals, and senior care uses from excessive noise through implementation of noise attenuation measures for new development.

Policy 10.1-I-7 Implement the City's noise control standards to ensure appropriate regulation of common residential, commercial, and industrial noise sources.

Policy 10.1-I-8 Require new noise sources to use best available and practical control techniques to minimize noise from all sources.

Policy 10.1-I-9 Continue to enforce the City's Noise Ordinance to reduce noise impacts.

Policy 10.1-I-10 Review and update the Noise Ordinance, as needed, to improve the City's ability to reduce noise impacts.

Policy 10.1-I-13 Encourage mixed-use and commercial developments to locate noise generating components such as loading areas, parking lots, driveways, trash enclosures, mechanical equipment, and other noisier components away from residential development.

Policy 10.1-I-15 Require evaluation of potentially harmful noise sources such as pure tones. Prohibit or place restrictions on such sources if the evaluation indicates that they may be harmful.

Policy 10.1-I-16 For purposes of city analyses of noise impacts, and for determining appropriate noise mitigation, a significant increase in ambient noise levels is assumed if the project causes ambient noise levels to exceed the following:

- The ambient noise level is less than 60 dB L_{dn} and the project increases noise levels by 5 dB or more.
- The ambient noise level is 60-65 dB L_{dn} and the project increases noise levels by 3 dB or more.
- The ambient noise level is greater than 65 dB L_{dn} and the project increases noise levels by 1.5 dB or more.

Policy 10.1-I-17 Require disclosure of potential significant noise impacts as part of real estate developments and transfers of land ownership within areas zoned for Mixed-Use development.

Policy 10.1-I-19 Protect sensitive receptors including residential land uses, hospitals, convalescent homes, schools, churches, and sensitive wildlife habitat including rare, threatened, or endangered species by measuring noise at multiple receptors for future projects that have the potential to exceed the CNEL normally acceptable decibel levels and require mitigation to reduce noise levels to acceptable levels.

Implementation of these policies would ensure that stationary noise from new developments is analyzed and mitigated to acceptable levels prior to project approval. Noise impacts from operational use of residential-scale HVAC units, industrial equipment, and other stationary noise sources would be reduced by proposed 2040 General Plan policies. Therefore, the 2040 General Plan stationary operational noise impact would be less than significant.

MOBILE OPERATIONAL NOISE

Implementation of the 2040 General Plan would allow additional buildout, which would generate new vehicle trips that could incrementally increase the exposure of land uses along roadways to operation roadway vehicle noise. Figure 3.10-2 shows the 60, 65, and 70 dBA L_{dn} noise contours from roadways and highways for 2040 roadway vehicle scenarios. The complete distances to the 70, 65, and 60 dBA L_{dn} noise contours for roadway segments are included in Appendix D. Table 3.10-6 shows the estimated roadway vehicle noise level increases on study roadway segments over existing conditions at 50 feet from the centerline of the nearest travel lane.

As shown in Table 3.10-6, significant roadway vehicle noise increases are estimated along Dougherty Road between Bollinger Canyon Road (north) and Bollinger Canyon Road (South), San Ramon Valley Boulevard between the City limit and Crow Canyon Road, Camino Ramon between Crow Canyon Road and Norris Canyon Road, and Camino Ramon between Norris Canyon Road and Bollinger Canyon Road. Along all other roadway study segments, roadway vehicle noise increases would be less than significant.

Figure 3.10-2 2040 Roadway Vehicle Noise Contours in General Plan Area

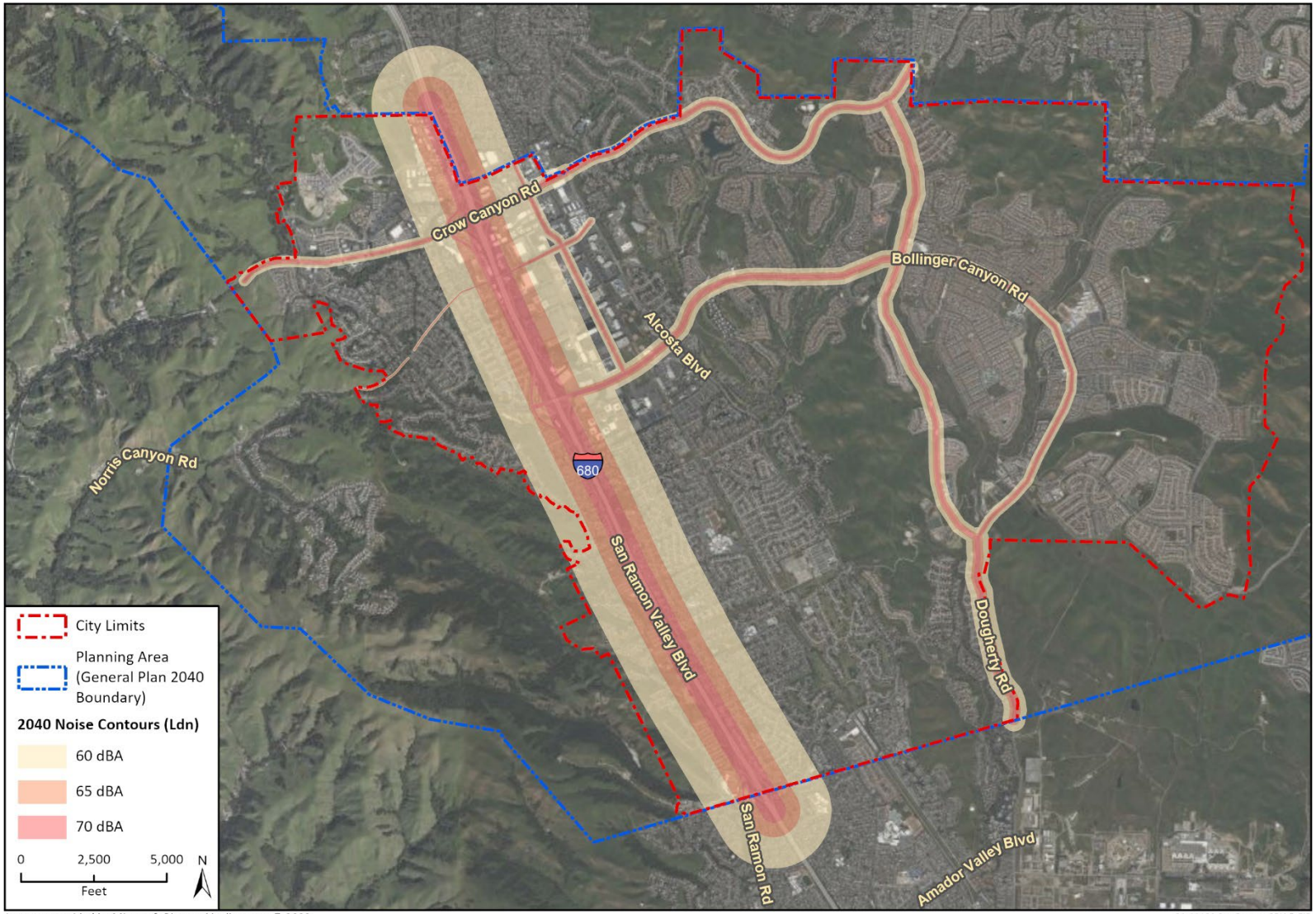


Table 3.10-6 2040 Roadway Vehicle Noise Increase Along Roadway Segments in General Plan Area

Roadway Segment	Segment	Existing ADT	2040 Buildout ADT	Existing Roadway Vehicle Noise Level at 50 feet (dBA L_{dn})	2040 Roadway Vehicle Noise Level at 50 feet (dBA L_{dn})	Roadway Vehicle Noise Increase (dBA L_{dn})	Significant? Y/N
Crow Canyon Road	Between Bollinger Canyon Road and San Ramon Valley Boulevard	16,445	19,400	67.4	68.1	0.7	N
Crow Canyon Road	Between San Ramon Valley Boulevard and Crow Canyon Place	35,037	43,900	71.4	72.4	1.0	N
Crow Canyon Road	Between San Ramon Valley Boulevard and Crow Canyon Place	30,770	34,000	70.4	70.9	0.4	N
Crow Canyon Road	Between San Ramon Valley Boulevard and Crow Canyon Place	23,063	28,500	68.4	69.3	0.9	N
Bollinger Canyon Road	Between San Ramon Valley Boulevard and Sunset Drive/Chevron Drive	45,293	49,600	71.3	71.7	0.4	N
Bollinger Canyon Road	Between Sunset Drive/Chevron Drive and Alcosta Boulevard	36,284	38,000	71.1	71.3	0.2	N
Bollinger Canyon Road	Between Alcosta Boulevard and Dougherty Road (N)	33,359	34,900	70.7	70.9	0.2	N
Bollinger Canyon Road	Between Dougherty Road (N) and Dougherty Road(S)	15,115	17,900	67.1	67.8	0.7	N
Dougherty Boulevard	Between Crow Canyon Place and Bollinger Canyon Road (N)	18,508	24,700	70.1	71.4	1.3	N
Dougherty Boulevard	Bollinger Canyon Road (N) and Bollinger Canyon Road (S)	11,793	17,200	68.6	70.2	1.6	**Y**
Dougherty Boulevard	Between Bollinger Canyon Road (S) and City Limit	24,244	29,900	71.8	72.7	0.9	N
San Ramon Valley Boulevard	Between City Limit and Crow Canyon Road	16,161	24,100	66.5	68.2	1.7	**Y**
San Ramon Valley Boulevard	Between Crow Canyon Road and Norris Canyon Road	19,041	24,300	67.2	68.3	1.1	N

Roadway Segment	Segment	Existing ADT	2040 Buildout ADT	Existing Roadway Vehicle Noise Level at 50 feet (dBA L_{dn})	2040 Roadway Vehicle Noise Level at 50 feet (dBA L_{dn})	Roadway Vehicle Noise Increase (dBA L_{dn})	Significant? Y/N
San Ramon Valley Boulevard	Between Norris Canyon Road and Bollinger Canyon Road	12,252	17,500	65.3	66.8	1.5	N
San Ramon Valley Boulevard	Between Bollinger Canyon Road and Alcosta Boulevard	12,548	21,100	64.2	66.5	2.3	N
Norris Canyon Road	Between City Limit and Bollinger Canyon Road	4,729	6,500	57.3	58.7	1.4	N
Norris Canyon Road	Between Bollinger Canyon Road and San Ramon Valley Boulevard	4,986	6,900	57.5	58.9	1.4	N
Norris Canyon Road	Between San Ramon Valley Boulevard and Alcosta Boulevard	10,579	15,400	64.8	66.4	1.6	N
Camino Ramon	Between Fostoria Way and Crow Canyon Road	11,921	14,900	64.7	65.6	1.0	N
Camino Ramon	Between Crow Canyon Road and Norris Canyon Road	14,234	24,400	65.7	68.0	2.3	**Y**
Camino Ramon	Between Norris Canyon Road and Bollinger Canyon Road	9,380	21,200	63.9	67.4	3.5	**Y**

ADT = average daily trips

Bold = significant increase

Source: Fehr & Peers, 2023

The following 2040 General Plan Noise Element Policies 10.1-I-1 and 10.1-I-5 as well as the following additional policy would reduce roadway vehicle noise:

Policy 10.1-I-12 Designate and enforce local truck routes to minimize truck traffic in noise-sensitive land use areas.

In addition, the following proposed 2040 General Plan Traffic and Circulation Element, Air Quality and Greenhouse Gas Element, Growth Management Element, Economic Element, and Noise Element goals and policies would encourage active transportation modes, such as walking and bicycling, as well as the use of public transit, thereby reducing vehicle trips and roadway vehicle noise in San Ramon.

Traffic and Circulation Element

Goal 5.6-G-1 Utilize Transportation Demand Management (TDM) strategies as an integral component of the City's transportation program to reduce total vehicle trips on San Ramon roadways and reduce the corresponding vehicle emissions that promote regional air quality improvements.

Policy 5.6-I-1 Engage with public agencies and other jurisdictions to promote local and regional public transit service in San Ramon as part of a multimodal and Complete Streets strategy.

Policy 5.6-I-2 Encourage and assist major employers and property managers of commercial sites with 50 or more employees to reduce the number of single-occupant vehicles by participating in the City's TDM programs, including the commuter benefit program, and programs provided by the Bay Area Air Quality Management District.

Policy 5.6-I-3 Encourage additional local bus or other public transportation service providers to and from regional transit lines. The City shall strive to improve the transit service to and from all neighborhoods and commercial districts in San Ramon.

Policy 5.6-I-4 Preserve options for future public transit and alternative transportation uses when designing improvements for roadways such as Bollinger Canyon Road Corridor within Dougherty Valley.

Policy 5.6-I-5 Encourage future transit uses within the I-680 corridor right-of-way and within the City of San Ramon.

Policy 5.6-I-6 Engage with other jurisdictions and agencies to coordinate the City's TDM programs with regional plans and action plans that are aimed at reducing traffic congestion and improving air quality.

Policy 5.6-I-7 Encourage new development to include a mix of uses and Complete Streets concepts that will allow people to walk and bike between destinations and reduce the amount of automobile vehicle-miles-traveled.

Policy 5.6-I-8 Encourage alternative public transportation programs and obtain funding for new TDM projects or programs.

Policy 5.6-I-9 Encourage employers and commercial complexes to emphasize public transit services or private alternatives to the single-occupant vehicle.

Policy 5.6-I-10 Work with transit providers to situate amenity rich transit stops and shelters at convenient and safe locations.

Policy 5.6-I-11 Promote increased transit ridership through the use of Transportation Management Associations and other employer-based transit programs, equip buses with three slot bike racks, and make transit information readily accessible in a smart phone friendly format.

Policy 5.6-I-12 Coordinate with Caltrans and transit providers to identify and implement park and ride lots with updated amenities with convenient access to public transit often called Mobility Hubs.

Policy 5.6-I-13 Work with the San Ramon Valley Unified School District and other appropriate agencies and organizations to reduce vehicle trips through the provision of transit programs, the TRAFFIX School Bus Program and promoting carpooling, bicycling, and walking.

Policy 5.6-I-14 Consider strategies such as shared parking, parking management plans (including valet parking), transit connected satellite parking and/or the construction of public parking facilities in the City Center or other commercial areas to serve projected parking demand, while carefully balancing the need for adequate parking against the desire to minimize traffic growth and create a pedestrian/bicycle friendly environment using Complete Streets design concepts.

Policy 5.6-I-15 Work with local transit providers to increase and expand weekend transit service and late night Owl service from regional rail and transit hubs.

Policy 5.6-I-16 Explore opportunities for the location or relocation of a transit center and/or multiple Mobility Hubs within Bishop Ranch Business Park to better geographically balance the public transit needs for the City.

Goal 5.7-G-1 Encourage bicycling and walking as alternatives to driving, consistent with Complete Streets concepts.

Policy 5.7-I-1 Establish a network of on- and off-street bicycle routes to encourage their use for commute, recreational, and other trips. Improve and expand bicycle routes for commuters in San Ramon and between San Ramon and neighboring cities.

Policy 5.7-I-2 Develop bicycle routes that provide access to regional employment centers, shopping centers, public facilities, transit centers, schools, and parks.

Policy 5.7-I-3 Continue to emphasize the Iron Horse Trail as a major north-south route for non-motorized modes of transportation including walking, biking, rollerblading and scooters by improving connectivity and enhancing amenities for these modes.

Policy 5.7-I-5 Require bicycle parking, storage and other support facilities as part of new office, retail, housing, and public facilities developments.

Policy 5.7-I-6 Continue to promote and implement through the development review process, continuous circulation facilities within commercial districts and residential neighborhoods to enhance connectivity and promote pedestrian and bicycle modes of transportation consistent with Complete Streets concepts.

Policy 5.7-I-8 Pursue grant funding for implementation of projects identified in the adopted Bicycle Master Plan and Walking District Master Plan, including funding from State and regional sources.

Policy 5.7-I-9 Implement roadway improvement projects to minimize both temporary and permanent reductions in bicycle and pedestrian mobility and/or accessibility.

Policy 5.7-I-10 Work with neighboring jurisdictions to ensure that continuity in bicycle and pedestrian networks is provided at jurisdictional boundaries.

Policy 5.7-I-11 Work with Caltrans and other appropriate agencies to improve bicycle and pedestrian mobility at freeway crossings.

Policy 5.7-I-13 Prioritize bicycle network improvements in the core area of San Ramon, including construction of new facilities and actions to remove barriers to cycling as identified in the San Ramon Bicycle Master Plan, in order to support development in the City's Priority Development Areas (PDAs).

Goal 5.7-G-1 Encourage bicycling and walking as alternatives to driving, consistent with Complete Streets concepts.

Policy 5.7-I-1 Establish a network of on- and off-street bicycle routes to encourage their use for commute, recreational, and other trips. Improve and expand bicycle routes for commuters in San Ramon and between San Ramon and neighboring cities.

Policy 5.7-I-2 Develop bicycle routes that provide access to regional employment centers, shopping centers, public facilities, transit centers, schools, and parks.

Policy 5.7-I-3 Continue to emphasize the Iron Horse Trail as a major north-south route for non-motorized modes of transportation including walking, biking, rollerblading and scooters by improving connectivity and enhancing amenities for these modes.

Policy 5.7-I-5 Require bicycle parking, storage and other support facilities as part of new office, retail, housing, and public facilities developments.

Policy 5.7-I-6 Continue to promote and implement through the development review process, continuous circulation facilities within commercial districts and residential neighborhoods to enhance connectivity and promote pedestrian and bicycle modes of transportation consistent with Complete Streets concepts.

Policy 5.7-I-8 Pursue grant funding for implementation of projects identified in the adopted Bicycle Master Plan and Walking District Master Plan, including funding from State and regional sources.

Policy 5.7-I-9 Implement roadway improvement projects to minimize both temporary and permanent reductions in bicycle and pedestrian mobility and/or accessibility.

Policy 5.7-I-10 Work with neighboring jurisdictions to ensure that continuity in bicycle and pedestrian networks is provided at jurisdictional boundaries.

Policy 5.7-I-11 Work with Caltrans and other appropriate agencies to improve bicycle and pedestrian mobility at freeway crossings.

Policy 5.7-I-13 Prioritize bicycle network improvements in the core area of San Ramon, including construction of new facilities and actions to remove barriers to cycling as identified in the San Ramon Bicycle Master Plan, in order to support development in the City's Priority Development Areas (PDAs).

Air Quality and Greenhouse Gas Element

Goal 12.5-G-1 Reduce greenhouse gas emissions and improve air quality by encouraging development that integrates land use and transportation planning principles through the creation of compact, mixed-use neighborhoods that are bike and pedestrian-friendly.

Policy 12.5-I-2 Support and encourage projects proposing infill, and mixed-use development that create walkable and bicycle friendly neighborhoods and communities that increase access to transit.

Policy 12.5-I-3 Implement the Growth Management program to assess new development project impacts on transit plans and facilities to minimize impacts from greenhouse gases and air pollution.

Policy 12.5-I-4 Consider the City's jobs to housing ratio when approving development applications to reduce VMT to below the significance threshold.

Goal 12.7-G-1 Reduce greenhouse gas emissions by shifting to multi-modal transportation systems, and zero-emission and low-emission vehicles and car-sharing programs by enhancing existing infrastructure and improving multi-modal infrastructure options.

Policy 12.7-I-1 The City shall encourage participation in feasible, affordable, innovative and flexible employer-based trip reduction programs for employees and encourage employer and resident participation in employer-based trip reduction programs, including, but not limited to the BAAQMD Commuter Benefit Program.

Policy 12.7-I-2 City fleet vehicle managers shall develop and maintain a fiscally sound plan to transition to cleaner fleets with a conversion schedule, where feasible, enacted by an adopted Green Vehicle Procurement Policy.

Policy 12.7-I-3 Work with telecommunications companies to develop state-of-the-art telecommunications infrastructure within the city, including broadband access and neighborhood work centers for telecommuting to reduce vehicular commute travel and related emissions.

Policy 12.7-I-4 Provide information to encourage the use of transportation modes that minimize vehicle miles travelled and the resulting reduction in air pollution and greenhouse gas emissions.

Policy 12.7-I-5 Construct and promote infrastructure and facilities that support and encourages the use of low-emission transportation and alternative modes of travel, including safe and comprehensive bicycle and pedestrian system that connects all parts of the city and development standards that require installation of alternative fuel infrastructure, such as electric vehicle chargers and hydrogen fueling stations.

Policy 12.7-I-6 Invest in low-emission or zero-emission transportation infrastructure through Traffic Demand Management programs and incentivizing trip reduction programs to reduce traffic congestion and harmful pollutants generated from increased traffic and traffic congestion.

Growth Management Element

Goal 3.3-G-1 Maintain acceptable traffic LOS on City streets and roadways through implementation of Transportation Demand Management (TDM), Growth Management, the Capital Improvement Program, and traffic engineering operational measures.

Policy 3.3-I-6 Support regional and local neighborhood transit options to reduce the use of the automobile and maintain acceptable traffic levels of service.

Goal 3.3-G-1 Utilize Transportation Demand Management (TDM) strategies as an integral component of the City's transportation program to reduce total vehicle trips on San Ramon roadways and reduce the corresponding vehicle emissions that promote regional air quality improvements.

Policy 3.4-I-1 Continue to implement the City's TDM Program to reduce trip generation.

Policy 3.4-I-2 Work with 511 Contra Costa, other jurisdictions and agencies to coordinate the City's TDM Program with regional TDM programs and activities.

Policy 3.4-I-3 Cooperate with regional and local service providers and other jurisdictions to promote local and regional public transit service.

Policy 3.4-I-4 Support local feeder transit service to and from current and future regional transit lines.

Policy 3.4-I-5 Preserve options for future transit use when designing improvements for roadways.

Policy 3.4-I-6 Locate future transit uses, such as light rail or BART, in the I-680 right-of-way.

Policy 3.4-I-7 Improve and expand the bicycle route network in San Ramon.

Goal 3.5-G-1 Participate in regional cooperative and multi-jurisdictional transportation planning for the maintenance of regional mobility and air quality standards as required by the Measure J Growth Management Program and the Contra Costa Congestion Management Plan (CMP).

Policy 3.5-I-4 Emphasize regional transportation demand management and trip reduction strategies as alternatives to increased roadway capacity.

Goal 3.6-G-1 Promote the opportunity to both work and live in San Ramon through implementation of the Housing Element.

Policy 3.6-I-4 As part of the development review process, support the accommodation of public transit, bicycle, and pedestrian access for new development.

Economic Element

Goal 2.3-G-1 Foster a climate in which businesses can prosper.

Policy 2.3-I-6 Encourage housing on infill sites in the City's two PDAs (City Center and North Camino Ramon), where flat terrain and proximity to employment, shops and services favors walking, bicycling and travel by other modes than single-occupant vehicle.

Goal 2.3-G-2 Provide adequate land use designations to accommodate planned development, with business and commercial areas complementing residential and public development in location/access, mix of uses, attractiveness, and environmental quality.

Policy 2.3-I-13 Promote and encourage public transit, carpool and vanpool opportunities into San Ramon's business areas.

Policy 2.3-I-14 Encourage and facilitate non-motorized means of transportation to business areas.

Policy 2.3-I-18 Encourage businesses to promote the use of commute alternatives among their employees by implementing the City's Transportation Demand Management (TDM) programs.

Noise Element

Goal 10.1-G-1 Achieve an acceptable noise environment for the present and future residents of San Ramon.

Policy 10.1-I-11 Designate walking districts in which new developments will be encouraged to provide facilities which support the use of alternative transportation modes such as walking, bicycling, carpooling and, where applicable, transit to reduce peak-hour traffic and vehicular noise.

Implementation of these policies would reduce operational roadway vehicle trips and associated operational roadway vehicle noise to the extent feasible. However, implementation of these goals and policies highlighted above would not guarantee that roadway vehicle noise would be below the thresholds of significance. As such, roadway vehicle noise impacts would be potentially significant.

Implementation of Mitigation Measure NOI-2 would reduce operational roadway vehicle noise. Some of the residences within the General Plan area have direct access (via driveways) to the associated roadway. Therefore, barrier walls would prevent access to individual properties and would be infeasible. Further, these impacted homes are on private property outside of the control of future project developers, so there may be limited admittance onto these properties to construct such walls. In other locations, residential properties are higher in elevation than the roadway (e.g., San Ramon Valley Boulevard between the northern City limit and Crow Canyon Road) where barriers may not be effective.

Rather, notable reductions in tire noise have been achieved via the implementation of special paving materials, such as rubberized asphalt or open-grade asphalt concrete overlays. For example, the California Department of Transportation conducted a study of pavement noise along Interstate 80 in Davis and found an average improvement of 6 to7 dBA reduction compared to conventional asphalt overlay.[12]

Therefore, operational roadway vehicle noise impacts would be less than significant with mitigation.

Mitigation Measures

MITIGATION MEASURE NOI-1 INCLUDE AND IMPLEMENT CONSTRUCTION NOISE REDUCTION MEASURES

To minimize noise during construction construction contractors shall implement the following measures for construction activities conducted within San Ramon. Construction plans submitted to the City shall include construction noise analysis and identify these measures on demolition, grading, and construction plans submitted to the City. The City of San Ramon Building Division shall verify that grading, demolition, and/or construction plans submitted to the City include these notations prior to issuance of demolition, grading and/or building permits.

- **Mufflers.** During excavation and grading construction phases, all construction equipment, fixed or mobile, shall be operated with closed engine doors and shall be equipped with properly operating and maintained mufflers consistent with manufacturers' standards.
- **Stationary Equipment.** All stationary construction equipment shall be placed so that emitted noise is directed away from the nearest sensitive receivers.
- **Equipment Staging Areas.** Equipment staging shall be located in areas that will create the greatest distance feasible between construction-related noise sources and noise-sensitive receivers.
- **Smart Back-up Alarms.** Mobile construction equipment shall have smart back-up alarms that automatically adjust the sound level of the alarm in response to ambient noise levels. Alternatively, back-up alarms shall be disabled and replaced with human spotters to ensure safety when mobile construction equipment is moving in the reverse direction in compliance with applicable safety laws and regulations.
- **Electrically-Powered Tools and Facilities.** Electrical power shall be used to run air compressors and similar power tools and to power any temporary structures, such as construction trailers or caretaker facilities, where feasible.
- **Noise Disturbance Coordinator**. The project applicant shall designate a "noise disturbance coordinator" responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of any noise complaint and shall require that reasonable measures be implemented to correct the problem. A telephone number for the disturbance coordinator and the City shall be posted at the construction site.
- **Temporary Noise Barriers.** Erect temporary noise barriers, where feasible, when construction noise is predicted to exceed the acceptable standards (e.g., 80 dBA L_{eq} at residential receivers, schools or other sensitive receptors during the daytime) and when the anticipated construction duration is greater than is typical (e.g., two years or greater). Temporary noise barriers shall be constructed with solid materials (e.g., wood) with a density of at least 1.5 pounds per square foot with no gaps from the ground to the top of the barrier. If a sound blanket is used, barriers

[12] Caltrans. 2011. I-80 Davis OGAC Pavement Noise Study.

shall be constructed with solid material with a density of at least 1 pound per square foot with no gaps from the ground to the top of the barrier and be lined on the construction side with acoustical blanket, curtain or equivalent absorptive material rated sound transmission class (STC) 32 or higher.

MITIGATION MEASURE NOI-2 IMPLEMENT OPERATIONAL ROADWAY VEHICLE NOISE REDUCTION MEASURES

To reduce operational roadway vehicle noise, the City shall implement a developer fair share mitigation program to fund the following measures for projects operated on the following roadway segments within San Ramon: Dougherty Road between Bollinger Canyon Road (north) and Bollinger Canyon Road (South), San Ramon Valley Boulevard between the northern City limit and Crow Canyon Road, Camino Ramon between Crow Canyon Road and Norris Canyon Road, and Camino Ramon between Norris Canyon Road and Bollinger Canyon Road. The City shall retain a qualified acoustical consultant to prepare a San Ramon-wide Roadway Vehicle Noise Reduction Study that specifies, at a minimum, the specific locations, extent, height of sound walls, and other design details such as "quiet pavement" to reduce roadway vehicle noise impacts at impacted roadways throughout San Ramon. The study shall also include an estimated cost of improvement along each impacted roadway segment to inform the developer fair share mitigation program. Roadway vehicle noise reduction measures may include, but are not limited to:

A. **Sound Barrier Walls.** The City shall construct sound barriers (e.g., walls or solid fences) along impacted roadways where there are no driveways that would break continuity, and along the residential portions or other sensitive receptor locations of such roadways. The sound walls would be continuous from grade to top, with no cracks or gaps, and have a minimum surface density of four pounds per square foot and a minimum height of six feet, as measured from the base elevation; and/or
B. **Special Roadway Paving.** The City shall install "quiet pavement" roadway improvements, such as rubberized asphalt or open-grade asphalt concrete overlays along impacted roadway segments (Dougherty Road between Bollinger Canyon Road (north) and Bollinger Canyon Road (South), San Ramon Valley Boulevard between the City limit and Crow Canyon Road, Camino Ramon between Crow Canyon Road and Norris Canyon Road, and Camino Ramon between Norris Canyon Road and Bollinger Canyon Road) where sound barriers (NOI-2A) are determined not to be feasible.

Level of Significance

Less than significant with mitigation

Groundborne Vibration and Noise Generation

Significance Criterion b:	Would the proposed plan result in generation of excessive groundborne vibration or groundborne noise levels?

IMPACT NOI-2 CONSTRUCTION OF INDIVIDUAL PROJECTS FACILITATED BY THE 2040 GENERAL PLAN WOULD TEMPORARILY GENERATE GROUNDBORNE VIBRATION AND NOISE, POTENTIALLY AFFECTING NEARBY LAND USES. OPERATION OF DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD NOT RESULT IN SUBSTANTIAL GROUNDBORNE VIBRATION AND NOISE. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Construction

Construction of individual future projects facilitated by the proposed 2040 General Plan could intermittently generate groundborne vibration to nearby properties. Table 3.10-7 lists groundborne vibration levels from various types of construction equipment at various distances.

Table 3.10-7 Vibration Source Levels for Construction Equipment

Equipment		Approximate Vibration Level (in/sec PPV)			
		25 feet from Source	50 feet from Source	100 feet from Source	200 feet from Source
Caisson Drilling		0.089	0.031	0.011	0.004
Jackhammer		0.035	0.012	0.004	0.002
Large Bulldozer		0.089	0.031	0.011	0.004
Loaded Truck		0.076	0.027	0.010	0.003
Pile Driver (impact)	Upper range	1.519	0.537	0.190	0.067
	Typical	0.644	0.228	0.081	0.028
Pile Driver (sonic)	Upper range	0.734	0.260	0.092	0.032
	Typical	0.170	0.060	0.021	0.008
Small Bulldozer		0.003	0.001	<0.001	<0.001
Vibratory Roller		0.21	0.074	0.026	0.009

Source: Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment*. November. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed April 2023).

As shown in Table 3.10-7, buildings and structures could experience the strongest vibration during the use of pile-drivers and vibratory rollers. Vibration levels from pile-drivers could approach 1.519 in/sec PPV at a distance of 25 feet from the source and 0.190 in/sec at 100 feet, and vibration levels from vibratory rollers could approach 0.21 in/sec PPV at a distance of 25 feet and 0.026 at 100 feet. The threshold for historic structures is 0.12 in/sec PPV; the threshold is higher for residential buildings at 0.2 in/sec PPV.

Vibration levels from typical equipment such as bulldozers and jackhammers would not exceed FTA thresholds for historic structures and residential buildings at a distance of 25 feet or greater. However, vibration levels from pile driving equipment and vibratory rollers may exceed FTA thresholds. The following 2040 General Plan Noise Element policy would reduce construction vibration.

Policy 10.1-I-18 Require new projects to mitigate to below Federal Transit Administration-recommended criteria for potential building architectural damage for ground-borne vibration at nearby residential and commercial uses, and implement vibration control measures in areas of infill development as necessary.

Implementation of Policy 10.1-I-18 would require new projects to mitigate below the FTA recommended criteria for potential building architectural damage for ground-borne vibration and implement vibration control measures in areas of infill development. However, since at this stage of planning, project-level details are not available for individual development projects that would be carried out under the 2040 General Plan, it is not possible to determine which projects may use pile driving or vibratory rollers and their exact vibration levels, locations, or time periods for construction of such projects. Therefore, construction vibration levels may exceed FTA vibration levels for preventing architectural building damage, and impacts would be potentially significant. However, implementation of Mitigation Measure NOI-3 would reduce 2040 General Plan construction groundborne vibration and noise impacts in San Ramon to a level of less than significant.

Operation

Residential and commercial land uses facilitated by the 2040 General Plan would not involve substantial vibration sources associated with operation such as railroad and subway. Therefore, 2040 General Plan operational groundborne vibration and noise impacts would be less than significant.

Mitigation Measures

MITIGATION MEASURE NOI-3 PREPARE A NOISE AND VIBRATION ANALYSIS AND IMPLEMENT CONSTRUCTION VIBRATION CONTROL MEASURES AND SCREENING DISTANCES

Prior to issuance of a building permit for a project requiring pile driving during construction a) within 135 feet of fragile structures (historical resources, 100 feet of non-engineered timber and masonry buildings [e.g., most residential buildings], b) within 75 feet of engineered concrete and masonry (no plaster); c) a vibratory roller within 40 feet of fragile historical resources or 25 feet of any other structure; and/or d) a dozer or other large earthmoving equipment within 20 feet for a fragile historical structure or 15 feet of any other structure, the project applicant shall prepare a groundborne noise and vibration analysis to assess and mitigate potential noise and vibration impacts related to these construction activities. This noise and vibration analysis shall be conducted by a qualified and experienced acoustical consultant or engineer. The vibration levels shall not exceed FTA architectural damage thresholds (e.g., 0.12 in/sec PPV for fragile or historical resources, 0.2 in/sec PPV for non-engineered timber and masonry buildings, and 0.3 in/sec PPV for engineered concrete and masonry). If vibration levels would exceed this threshold, alternative uses such as drilling piles as opposed to pile driving, static rollers as opposed to vibratory rollers, and lower horsepower earthmoving equipment shall be used. If necessary, construction vibration monitoring shall be conducted to ensure FTA vibration thresholds are not exceeded.

Level of Significance

Less than significant with mitigation

Airport Activity Noise

Significance Criterion c:	For location 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 proposed plans expose people residing or working in the project area to excessive noise levels?

IMPACT NOI-3 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD NOT EXPOSE PEOPLE RESIDING OR WORKING IN THE PLAN AREA TO EXCESSIVE NOISE LEVELS RELATED TO AIRSTRIP/AIRPORT OPERATION. THERE WOULD BE NO IMPACT.

Construction

Potential noise impacts related to locations proximate to a private airstrip or public use airport are limited to operational impacts. No respective construction impacts related to effects of airport activity noise would occur.

Operation

The nearest airport to San Ramon is the Livermore Municipal Airport, which is located approximately 4.7 miles southeast of the San Ramon's southern boundary. San Ramon Planning Area (i.e., General Plan area) does not fall within the Livermore Municipal Airport's 55, 60, or 65 dBA CNEL noise contour.[13] The Livermore Municipal Airport does not offer commercial airline service and would not serve residents and businesses associated with development facilitated by the 2040 General Plan. As such, implementation of the 2040 General Plan would not increase airport activities or airport noise. Airport activity would not expose residents and workers to excessive noise. Therefore, there would be no airport activity noise impact related to implementation of the 2040 General Plan.

Mitigation Measures

No mitigation is required.

Significance After Mitigation

Less than significant without mitigation

3.10.5 Cumulative Impacts

The geographic scope of the cumulative noise analysis is the City of San Ramon and adjacent city and County areas. The cumulative analysis considers the nearby past, present, and reasonably foreseeable future plans and projects listed in Table 3-1 (see Chapter 3.0*, Environmental Impact Analysis*) located in San Ramon, Danville, and unincorporated Contra Costa County, in addition to the proposed plan.

[13] Alameda, County of. 2012. Livermore Executive Airport Airport Land Use Compatibility Plan. https://www.acgov.org/cda/planning/generalplans/documents/LVK_ALUCP_082012_FULL.pdf (accessed April 2023).

Construction Noise

Construction noise generated by the 2040 General Plan, in combination with construction activities for other cumulative projects that may be constructed simultaneously could, without mitigation, substantially increase noise levels in the vicinity of future projects. Mitigation measures have been identified to help reduce noise from construction equipment from 2040 General Plan projects. Since construction of cumulative projects, including those proposed under development facilitated by the 2040 General Plan, would not be permitted to occur in close proximity to each other and simultaneously, noise from individual construction projects would not combine to create significant cumulative impacts. Therefore, the cumulative impact related to construction noise would be less than significant with mitigation.

Operational Stationary Noise

Development facilitated by the 2040 General Plan would introduce new stationary noise sources to the ambient noise environment in the vicinity of the plan area, including new mechanical ventilation equipment. These sources may combine with other nearby cumulative projects to result in higher noise levels. However, operational noise from these sources is localized and rapidly attenuates within an urbanized setting due to the effects of intervening structures and topography that block the line of sight and due to other noise sources closer to receptors that obscure project-related noise. Implementation of City municipal code noise standards would ensure that noise from new stationary sources as part of the cumulative projects would be within acceptable levels. Therefore, the cumulative impact related to operational stationary noise would be less than significant.

Operational Mobile Noise

Roadway vehicle noise increases from development facilitated by the 2040 General Plan and other cumulative projects could contribute to noise level increases but not in a manner that exceeds impact criteria with implementation of identified mitigaiton. Therefore, with mitigation operational mobile (roadway vehicle) cumulative noise impacts would be less than significant with mitigation.

Groundborne Vibration and Noise

Although there could be other cumulative projects simultaneously under construction near a development project facilitated by the 2040 General Plan, the potential for construction groundborne vibration and noise impacts is within relatively close distances (e.g., within approximately 25 feet for a vibratory roller). Since no two construction cumulative projects would both be within 25 feet of a given sensitive structure, cumulative groundborne vibration and noise impacts would be less than significant.

Overall Level of Cumulative Significance

Less than significant with mitigation

3.11 Public Services and Recreation

3.11.1 Introduction

This section describes the existing conditions related to public services (fire, police, schools, library) and recreation (parks and open space) serving San Ramon, as well as the relevant regulatory framework. This section also evaluates potential impacts to public services and recreation that could result from implementation of the 2040 General Plan. Information in this section is based on information obtained from the San Ramon 2035 General Plan, San Ramon Municipal Code, as well as from the San Ramon Valley Fire Protection District, San Ramon Police Department, San Ramon Valley Unified School District, Contra Costa County Library, and San Ramon Parks and Community Services Department.

3.11.2 Environmental Setting

Fire Protection

San Ramon Valley Fire Protection District Service Area

The San Ramon Valley Fire Protection District (SRVFPD) provides fire, rescue, and emergency medical services to the San Ramon, communities of Alamo, Blackhawk, the Towns of Danville and Diablo, and portions of Morgan Territory and the Tassajara Valley within Contra Costa County. The SRVFPD service area encompasses approximately 155 square miles and covers approximately 192,858 people. SRVFPD operates nine fire stations with 14 fire companies and approximately 45 full-time staff members across this service area, and provides a variety of services including fire suppression, fire prevention, emergency medical, rescue, ambulance transport, and public education programs.

The SRVFPD fleet consists of 38 fire engines of several types, four ladder trucks, three water tenders, 10 ambulances, one heavy rescue truck, one hazardous materials truck, and over 50 specialty units and staff vehicles.[1] SRVFPD receives approximately 9,600 calls annually, approximately two-thirds of which consist of rescue and emergency medical calls.[1] Currently, SRVFD response times for first unit response are approximately seven minutes and 33 seconds in urban areas[2] and eight minutes in suburban areas, and for medical responses are approximately 10 minutes in urban areas and 10 minutes in suburban areas.[3]

San Ramon (General Plan Area)

The 36.7-square-mile San Ramon Planning Area (i.e., the General Plan area) is served by four SRVFPD fire stations located within San Ramon at the following locations:[4]

[1] San Ramon Valley Fire Protection District (SRVFPD). 2020a. 2020 Year in Review. https://www.firedepartment.org/our-district/district-overview/year-in-review (accessed March 2023).
[2] Roy Wendel, Plans Examiner and Fire Investigator, San Ramon Valley Fire Protection District. Personal email communication. April 11, 2023.
[3] San Ramon Valley Fire Protection District (SRVFPD). 2020b. San Ramon Valley Fire Protection District Board of Directors Regular Board Meeting, August 26, 2020. https://www.firedepartment.org/home/showpublisheddocument/4408 (accessed March 2023).
[4] San Ramon Valley Fire Protection District (SRVFPD). 2018. Maps of Stations and Boundaries. https://www.google.com/maps/d/viewer?mid=13HDYZOSMkAp8TTXpuZ10SioGZ8tGpFHE&ll=37.798864183913054%2C-121.93927576155302&z=12 (accessed March 2023).

- Fire Station 30, 11445 Windemere Parkway
- Fire Station 34, 12599 Alcosta Boulevard
- Fire Station 38, 1600 Bollinger Canyon Road
- Fire Station 39, 9399 Fircrest Lane

Figure 3.11-1 shows these existing fire stations within San Ramon.

Police Protection

City of San Ramon Police Department Service Area

Law enforcement services within San Ramon City limits are provided by the San Ramon Police Department (SRPD). Protection services include emergency and non-emergency police response, routine police patrols, investigative services, traffic enforcement, traffic investigation, parking regulation, vehicle auction, and victim services. The sole SRPD station is located at 2401 Crow Canyon Road and serves the areas within San Ramon City limits. SRPD consists of 70 sworn officers, 19 civilian staff, and 40 volunteers.[5]

Contra Costa County Office of the Sheriff Service Area

Law enforcement services in the General Plan area outside of San Ramon City limits are provided by the Contra Costa County Office of the Sheriff (CCCOS). CCCOS protection services include policing of unincorporated areas of Contra Costa County and contracted cities (Danville, Lafayette, and Orinda), as well as air support, marine patrol, dispatch, investigations, forensic services, and Office of Emergency Services. CCCOS has approximately 723 sworn officers and 377 professional employees and operates six stations and administrative offices. Each year, CCCOS receives approximately 600,000 calls for service, 10 percent of which are 911/emergency calls.[6]

The closest CCCOS station to the General Plan area is the Valley Station, located in the unincorporated community of Alamo, approximately five miles north of San Ramon City limits. The Valley Station is comprised of 33 sworn staff members, including one station commander, six sergeants, 21 deputies, and five special district deputies. Non-sworn personnel include one community services officer and approximately 25 volunteers. The Valley Station serves an approximately 250-square-mile service area in the central portion of Contra Costa County, including the portions of the General Plan area outside of San Ramon City limits.[7]

San Ramon (General Plan Area)

20.1 square miles of the San Ramon Planning Area (i.e., the General Plan area) is within City limits and served by SRPD. The remaining 16.16 square miles of the General Plan area is outside of City limits but within the San Ramon Planning Area and is served by CCCOS. Figure 3.11-1 shows the existing police station and sheriff station serving San Ramon.

[5] San Ramon Police Department. 2023. Welcome to the San Ramon Police Department. https://www.sanramon.ca.gov/cms/one.aspx?pageId=11583441 (accessed March 2023).
[6] Contra Costa County Office of the Sheriff (CCCOS). 2023. Office of the Sheriff Overview. https://www.cocosheriff.org/about-us/office-of-the-sheriff-overview (accessed June 2023).
[7] Contra Costa County Office of the Sheriff (CCCOS). 2023. Valley Station. https://www.cocosheriff.org/bureaus/field-operations/patrol-division/valley-station (accessed June 2023).

Figure 3.11-1 Existing San Ramon Fire and Police Station Locations

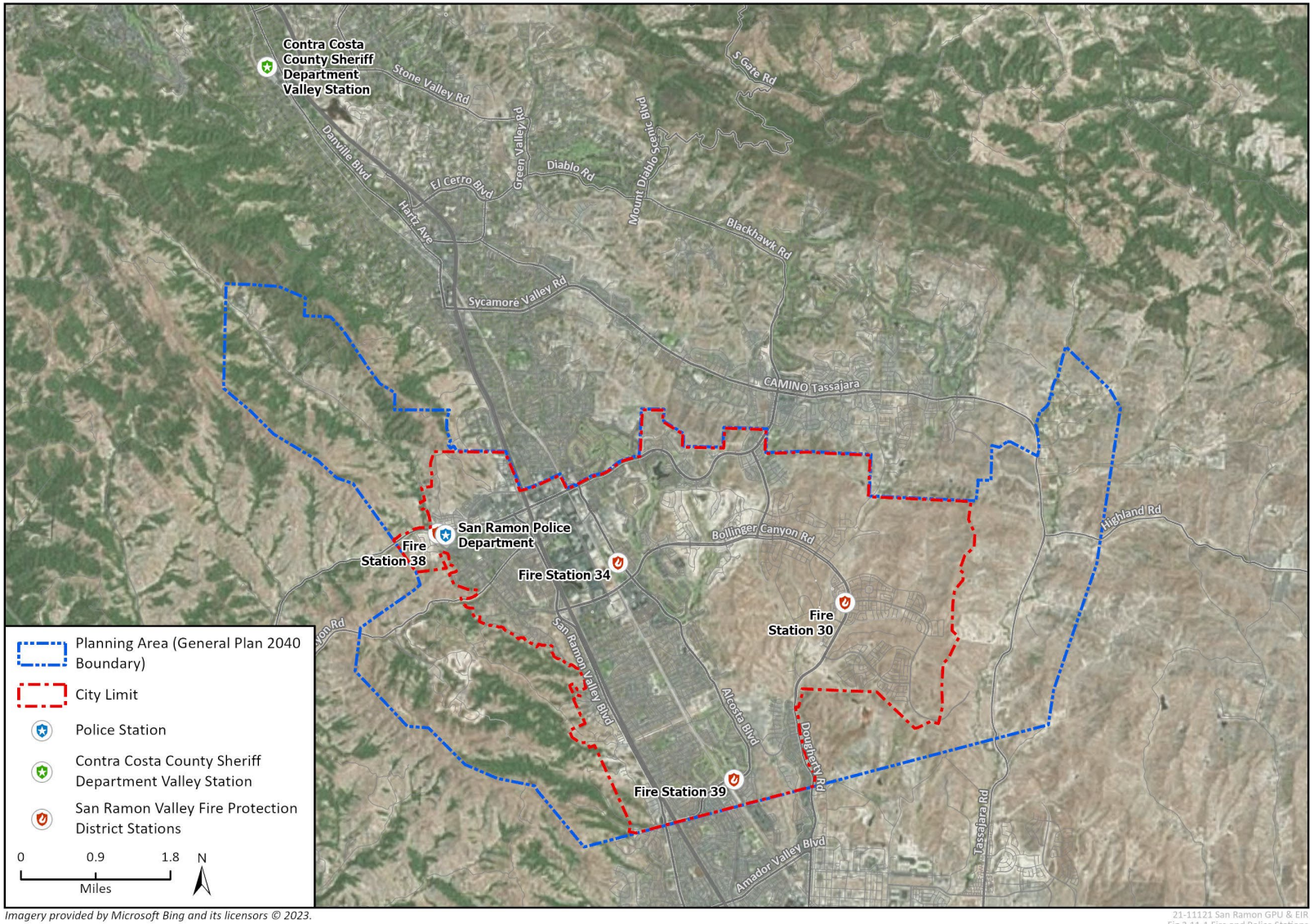


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Fig 3.11-1 Fire and Police Stations

Public Schools

San Ramon Valley Unified School District Service Area

The San Ramon Valley Unified School District (SRVUSD) provides elementary, middle, and high school public education services to the City of San Ramon, the Town of Danville, and the unincorporated communities of Alamo, Diablo, and Blackhawk. SRVUSD operates 22 elementary schools, eight middle schools, five high schools and one alternative education school. As of the 2021-2022 school year, SRVUSD had a total enrollment of 29,844 students.[8]

San Ramon (General Plan Area)

The 36.7-square-mile San Ramon Planning Area (i.e., the General Plan area) is served by 14 elementary schools,[9] five middle schools,[10] and three high schools, with all but three of these schools located within San Ramon (see Figure 3.11-2).[11] These schools, their existing enrollment, and capacities are shown below in Table 3.11-1.

Table 3.11-1 SRVUSD School Enrollment and Capacity within General Plan Area

School Name	Grades	2022-2023 Enrollment	Total Capacity
Bella Vista Elementary	K-5	492	619
Bollinger Canyon Elementary	K-5	495	569
Country Club Elementary	K-5	511	519
Coyote Creek Elementary	K-5	660	897
Creekside Elementary	K-5	550	727
Golden View Elementary	K-5	648	619
Hidden Hills Elementary	K-5	545	825
Live Oak Elementary	K-5	621	825
Montevideo Elementary	K-5	626	700
Neil Armstrong Elementary	K-5	504	575
Quail Run Elementary	K-5	856	975
Tassajara Hills Elementary	K-5	509	650
Twin Creeks Elementary	K-5	639	800
Walt Disney Elementary	K-5	547	525
Diablo Vista Middle	6-8	895	926

[8] San Ramon. San Ramon 2040 General Plan Update – Public Facilities and Utilities Element.
[9] San Ramon Valley Unified School District. 2023. Elementary School Boundaries. https://www.srvusd.net/documents/Departments/Facilities/Find-Your-School/Elementary-School-boundary-map-PDF.pdf (accessed March 2023).
[10] San Ramon Valley Unified School District. 2023. Middle School Boundaries. https://www.srvusd.net/documents/Departments/Facilities/Find-Your-School/Middle-School-boundary-map-PDF.pdf (accessed March 2023).
[11] San Ramon Valley Unified School District. 2023. High School Boundaries. https://www.srvusd.net/documents/Departments/Facilities/Find-Your-School/High-School-boundary-map-PDF.pdf (accessed March 2023).

School Name	Grades	2022-2023 Enrollment	Total Capacity
Gale Ranch Middle	6-8	1,080	1,037
Iron Horse Middle	6-8	1,003	967
Pine Valley Middle	6-8	959	956
Windemere Ranch Middle	6-8	1,115	1,091
California High	9-12	2,911	2,717
Dougherty Valley High	9-12	3,309	3,079
Del Amigo High (continuation)	7-12	27	30
Venture (independent study)	K – 12	109	N/A

Sources: Tina Perault, FA, Senior Planning & Development Manager, San Ramon Valley Unified School District. Email communication. April 28, 2023.
San Ramon. San Ramon 2040 General Plan Update - Public Facilities and Utilities Element.

Total SRVUSD current enrollment at all schools is approximately 29,844 students, 17,630 of which attend schools in San Ramon. Enrollment at SRVUSD schools has been slightly declining in recent years; since the 2016-2017 school year, enrollment decreased by 8.5 percent overall and has decreased by an average of 470 students each year.[12] SRVUSD schools that serve the General Plan area are generally near or slightly below total capacity. Four schools that serve the General Plan area are slightly overcapacity (Country Club Elementary, Golden View Elementary, Dougherty Valley High, and California High). Over the last 20 years, SRVUSD's service area boundary expanded to include the unincorporated areas of Alamo Creek and Dougherty Valley. These two areas added approximately 12,500 existing and planned residential units to the SRVUSD service area.[13] To accommodate existing student populations and planned growth, SRVUSD opened six elementary schools, two middle schools, and two high schools, and expanded several existing schools.

Table 3.11-2 outlines the student generation rates utilized by SRVUSD to calculate student enrollment associated with general housing development.

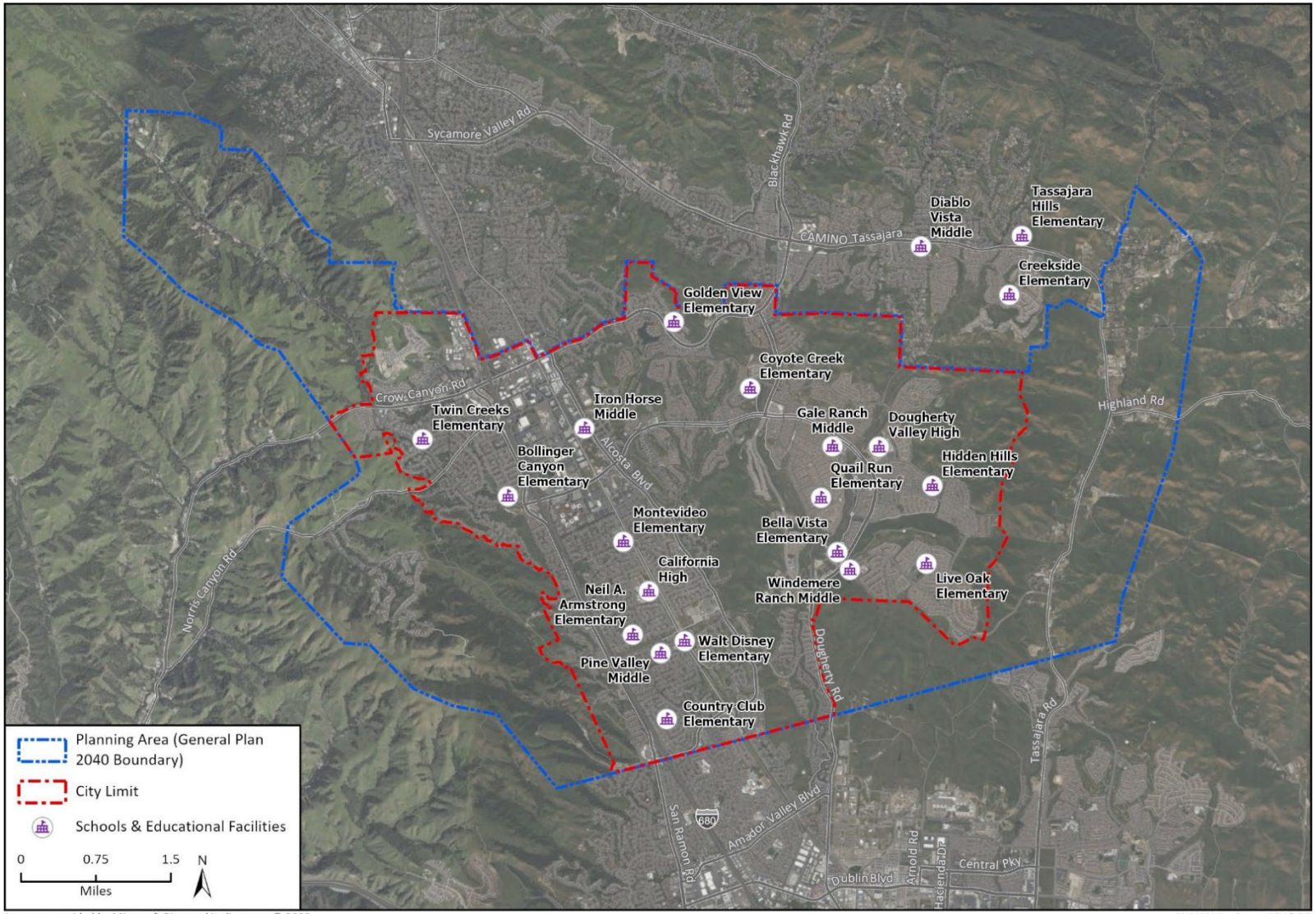
Table 3.11-2 SRVUSD Student Generation Rates

Housing Type	Generation Rate by Grade Level (students per dwelling unit)		
	K – 5	6 – 8	9 – 12
Single Family Detached	0.25	0.18	0.32
Single Family Attached	0.25	0.17	0.28
Multi-Family	0.22	0.13	0.18

Source: Tina Perault, FA, Senior Planning & Development Manager, San Ramon Valley Unified School District. Email communication. April 28, 2023.

[12] California Department of Education. 2023. Enrollment Multi-Year Summary by Grade, San Ramon Valley Unified Report. https://dq.cde.ca.gov/dataquest/dqcensus/EnrGrdYears.aspx?cds=0761804&agglevel=district&year=2022-23 (accessed June 2023).
[13] Tine Perault, FA. 2023. Personal Communication with Kayleigh Limbach, Environmental Planner, regarding SRVUSD service boundaries and recent enrollment. Email communication, April 2023.

Figure 3.11-2 Existing School Locations Serving San Ramon



Imagery provided by Microsoft Bing and its licensors © 2023.

21-11121 San Ramon GPU & EIR
Figure 3.11-2 San Ramon Valley Unified School District School Locations

Libraries

Contra Costa County Library System Service Area

The Contra Costa County Library system operates 28 library facilities across Contra Costa County that serve the Cities of San Ramon, Antioch, Brentwood, Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Oakley, Orinda, Pinole, Pleasant Hill, San Pablo, and Walnut Creek; the Towns of Danville and Moraga; and the unincorporated communities of Bay Point, Crockett, El Sobrante, Kensington, and Rodeo.[14]

San Ramon (General Plan Area)

There are two Contra Costa County Library locations in the General Plan area; the San Ramon Library is located at 100 Montgomery Street, and the Dougherty Station Library is located at 17017 Bollinger Canyon Road. Both libraries provide thousands of materials in multiple languages, and offer several programs to library patrons. Programs include weekly English language conversation meetings, weekly story readings for children of varying ages, and after-school art programs.

Parks and Recreational Facilities

San Ramon Parks & Community Services Department Service Area (General Plan Area)

Parkland in San Ramon is managed by the San Ramon Parks and Community Services Department (SRPCSD). Parkland within San Ramon totals approximately 395 acres. SRPCSD parks within the 36.7-square-mile San Ramon Planning Area (i.e., the General Plan area) are categorized by the following definitions:

- **Neighborhood Park.** A park or playground at least two acres in size, developed primarily to serve the recreational needs of citizens living within a half mile radius of the park. The City's goal, at General Plan buildout, is to maintain 4.5 acres of Neighborhood Parks, and School Parks per 1,000 residents.
- **School Park.** A neighborhood park developed, improved, and maintained on school grounds by the City. School parks are utilized jointly by students and by residents primarily within a half-mile radius of the surrounding neighborhoods. The City's goal at General Plan buildout is to maintain 4.5 acres of Neighborhood Parks, and School Parks per 1,000 residents.
- **Community Park.** A larger park or facility developed to meet the park and recreational needs of those living or working within a three-mile radius of the park. Community parks vary from 10 to 60 acres. The City's goal, at General Plan buildout, is to maintain 2.0 acres of Community Parks and Specialized Recreation Areas per 1,000 residents.
- **Regional Park.** A park having a wide range of improvements not usually found in neighborhood and community parks and designed to meet the recreational needs of the entire regional population. A regional park must be over 200 acres in size, including both land and water bodies and should be within 30-minute driving time from the residents it serves. Recreational facilities, confined to a Recreation Staging Area, must not occupy more than 30 percent of the park's area, leaving 70 percent of the park's area to remain in its natural state. Recreational facilities

[14] Contra Costa County Library. 2023. Contra Costa County Library Locations. https://ccclib.bibliocommons.com/v2/locations?_ga=2.171515296.1693043548.1679953772-166119431.1679087614&_gl=1*1qchr7v*_ga*MTY2MTE5NDMxLjE2NzkwODc2MTQ.*_ga_ZET0BKEQP0*MTY3OTk1Mzc3Mi4yLjEuMTY3OTk1MzgxMC4wLjAuMA..*_ga_G99DMMNG39*MTY3OTk1Mzc3Mi4yLjEuMTY3OTk1MzgxMC4wLjAuMA.. (accessed March 2023).

might include a golf course, a zoo, a nature area, and/or hiking or equestrian trails. Some of these facilities may be under lease to community groups.

- **Specialized Recreation Area.** A recreation area or facility devoted to a very specific activity or use such as community gardens, tennis court facilities, dog parks, linear parks or properties of historical significance such as Forest Home Farms. The City's goal, at General Plan buildout, is to maintain 2.0 acres of Community Parks and Specialized Recreation Areas per 1,000 residents.
- **Public Spaces.** A publicly or privately owned recreation space, area, or facility that is accessible to the public, where appropriate in mixed-use or multi-family developments, developed to enhance the recreation or leisure interactive experience of residents or visitors for passive or active use. Public Spaces might include an interactive water element, public art, gardens, trails and paths, plazas, lakes, labyrinths, picnic areas, tot-parks, or pocket parks, and includes a balance of hardscape and landscaped areas. The City may allow for partial or full parkland dedication credit for these types of publicly accessible spaces, based on City need and community benefit to the general public.

Of the 395 acres of total SRPCSD parkland, there are approximately 140 acres of neighborhood parks, 78 acres of school parks, 108 acres of community parks, 78 acres of specialized recreation areas, and 22 acres of public spaces.[15] 395 acres of total San Ramon parkland equates to approximately 4.72 acres of parkland per 1,000 residents in San Ramon, short of the City's guideline of 6.5 acres of parkland per 1,000 residents, at General Plan buildout.[16] The City also operates four community centers, two aquatic facilities, two performing arts theaters, and two gyms.[17] In addition, 6,584 acres of East Bay Regional Park District (EBRPD) parkland is available to San Ramon residents in the western portions of the General Plan area within the Bishop Ranch Regional Open Space Preserve and Las Trampas Wilderness Regional Preserve. Table 3.11-3 summarizes the types and areas of existing parkland in San Ramon, and Figure 3.11-3 through shows the locations of parkland throughout the General Plan area.

Table 3.11-3 Existing San Ramon Parks, Open Space, & Recreational Facilities Inventory

Park or Recreational Facility	Acreage[1]
Community Parks	**108.6**
Athan Downs	20.4
Central Park	40.8
Memorial Park	16.3
Rancho San Ramon Community Park (Phase 1)	22.9
Rancho San Ramon Community Park (Phase 2, under construction)	8.2
Neighborhood Parks	**140**
Arlington Park	4.1
Bellingham Square	4.1
Bishop Ranch Park (under construction)	2

[15] City of San Ramon Planning & Community Development Department and Parks & Community Services Department.
[16] San Ramon, City of. 2015. 2035 General Plan Chapter 6 Parks and Recreation. https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_10826046/File/Our%20City/Departments/Community%20Development/Planning/General%20Plan/General%20Plan%202035%202019-10-21/06%20Parks%20and%20Rec.pdf (accessed June 2023).
[17] San Ramon, City of. 2019. San Ramon Parks, Trails, Open Space, and Recreation Master Plan. https://cdn5-hosted.civiclive.com/UserFiles/Servers/Server_10826046/File/Our%20City/Departments/Parks%20&%20Comm%20Srvs/Department%20Information/Master%20Plan/2020%20Master%20Plan/San%20Ramon%20PTOSR%20Master%20Plan_FINAL.pdf (accessed March 2023).

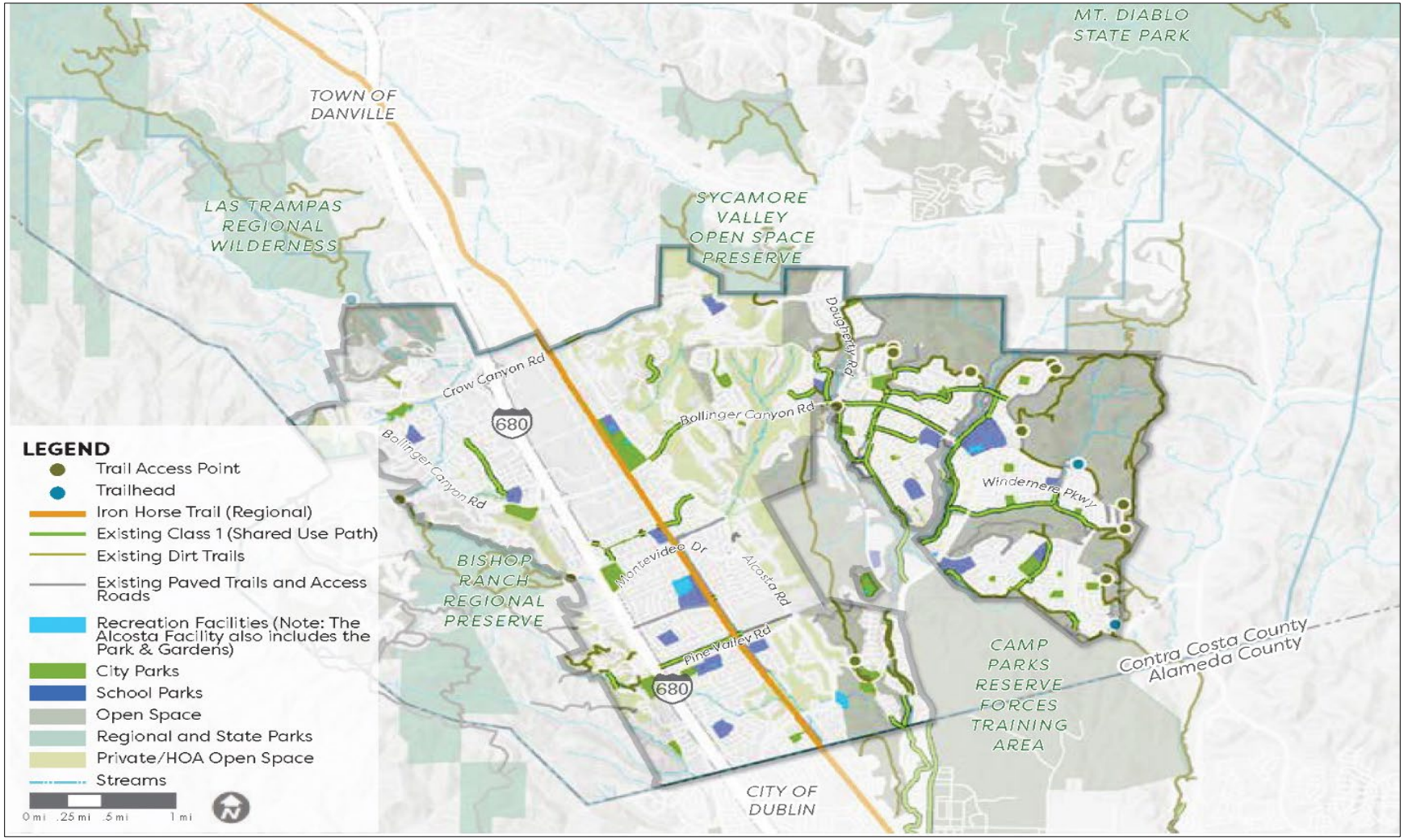
Park or Recreational Facility	Acreage[1]
Boone Acres	5.5
Centennial Park	5.3
Compass Point Park	1.5
Country Fair Park	0.18
Coyote Crossing	11.7
Creekside Park	6.0
Critter Crossroads (under construction)	8.4
East Branch Park	5.1
Fire Truck Park	1.2
Hidden Crest Park	2.0
Hidden Valley Park	4.5
Hummingbird Playground	0.4
Inverness Park	5.8
Limerick Park	2.8
Mill Creek Hollow	3.5
Monarch Park	6.3
Mosaic Park	3.9
Old Ranch Park	6.7
Piccadilly Square Park	4.1
Ramona Park	4.1
Red Willow Park	5.0
Richard Fahey Village Green Park	4.4
Sherwood Park	1.5
Six Pillars Park	2.7
Souyen Park	2.4
Sunrise Ridge (under construction)	13.6
Valley View Park	10
Windy Hills Park	1.3
School Parks	**78.3**
Elementary Schools	
Bella Vista Elementary School Park	2.6
Bollinger Canyon Elementary School Park	3.4
Country Club Elementary School Park	7.1
Coyote Creek School Park	5.3
Golden View Elementary School Park	5.0
Hidden Hills Elementary School Park	3.0
Live Oak Elementary School Park	1.5
Montevideo Elementary School Park	3.7
Neil Armstrong Elementary School Park	4.2
Quail Run Elementary School Park	6.5

Park or Recreational Facility	Acreage[1]
Twin Creek Elementary School Park	3.7
Walt Disney Elementary School Park	4.7
Middle Schools	
Gale Ranch Middle School Park	6.5
Iron Horse Middle School Park and Gym	–
Pine Valley Middle School Park	9.4
Windemere Ranch School Park	9
High Schools	
Dougherty Valley High School and Aquatic Center	3
Specialized Recreation Areas	**78**
Alcosta Senior And Community Center Park and Gardens	7.8
Bark and Ride	6.7
Crow Canyon Gardens	9.7
Del Mar Dog Park	1.2
Forest Home Farms Historic Park	14.5
Gale Park	2.7
San Ramon Sports Park	14.8
San Ramon Olympic Pool and Aquatic Park	6
Summit View Trails	13.4
Tassajara Ridge Staging Area and Dog Park	1
Public Spaces	**22.5**
CityWalk Lakes	22.5
Total	**395.4**

Source: San Ramon, City of. 2019. San Ramon Parks, Trails, Open Space, and Recreation Master Plan. https://cdn5-hosted.civiclive.com/UserFiles/Servers/Server_10826046/File/Our%20City/Departments/Parks%20&%20Comm%20Srvs/Department%20Information/Master%20Plan/2020%20Master%20Plan/San%20Ramon%20PTOSR%20Master%20Plan_FINAL.pdf (accessed March 2023).

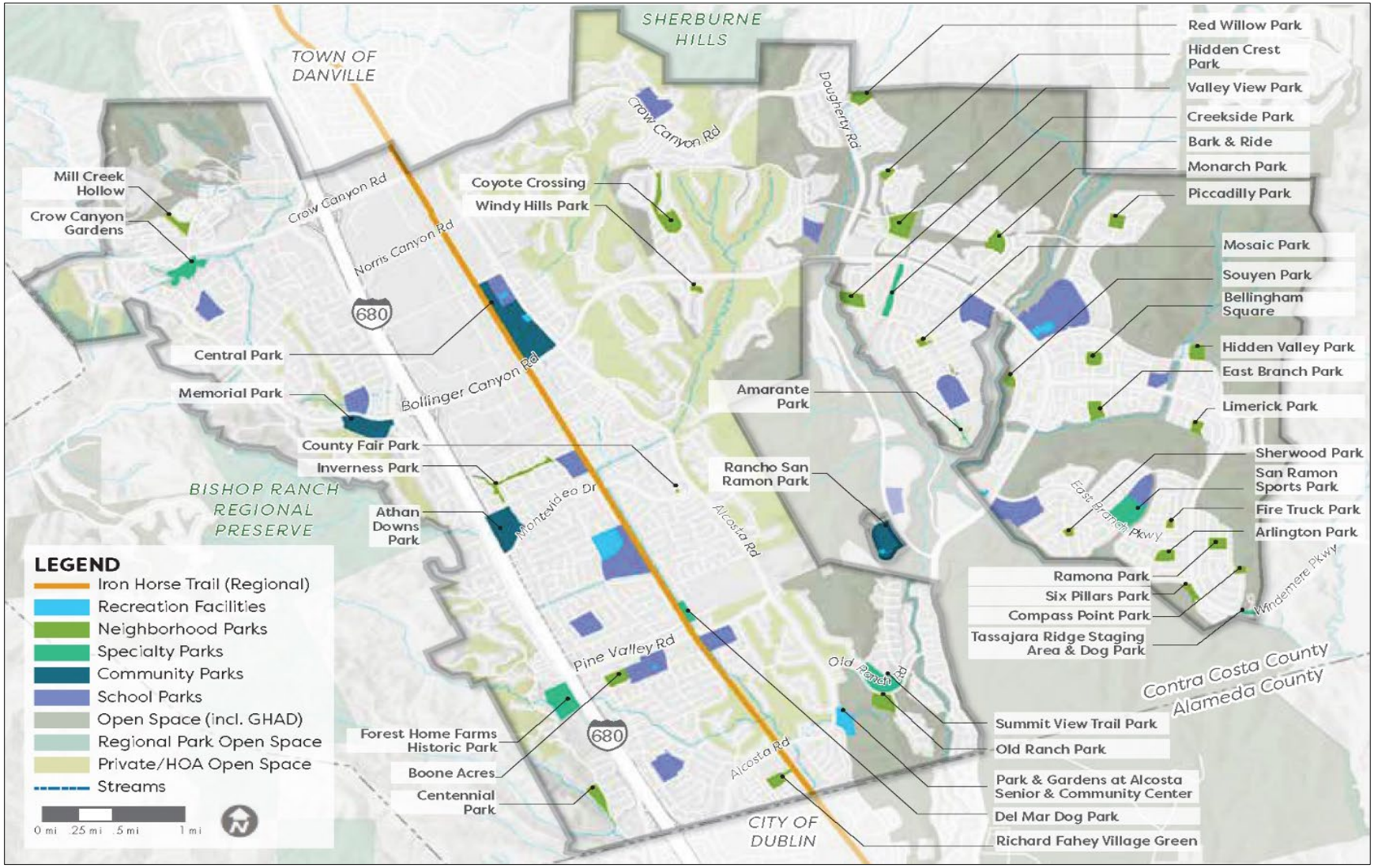
Numbers may not add due to rounding.

Figure 3.11-3 Existing School Parks and Recreation Facilities



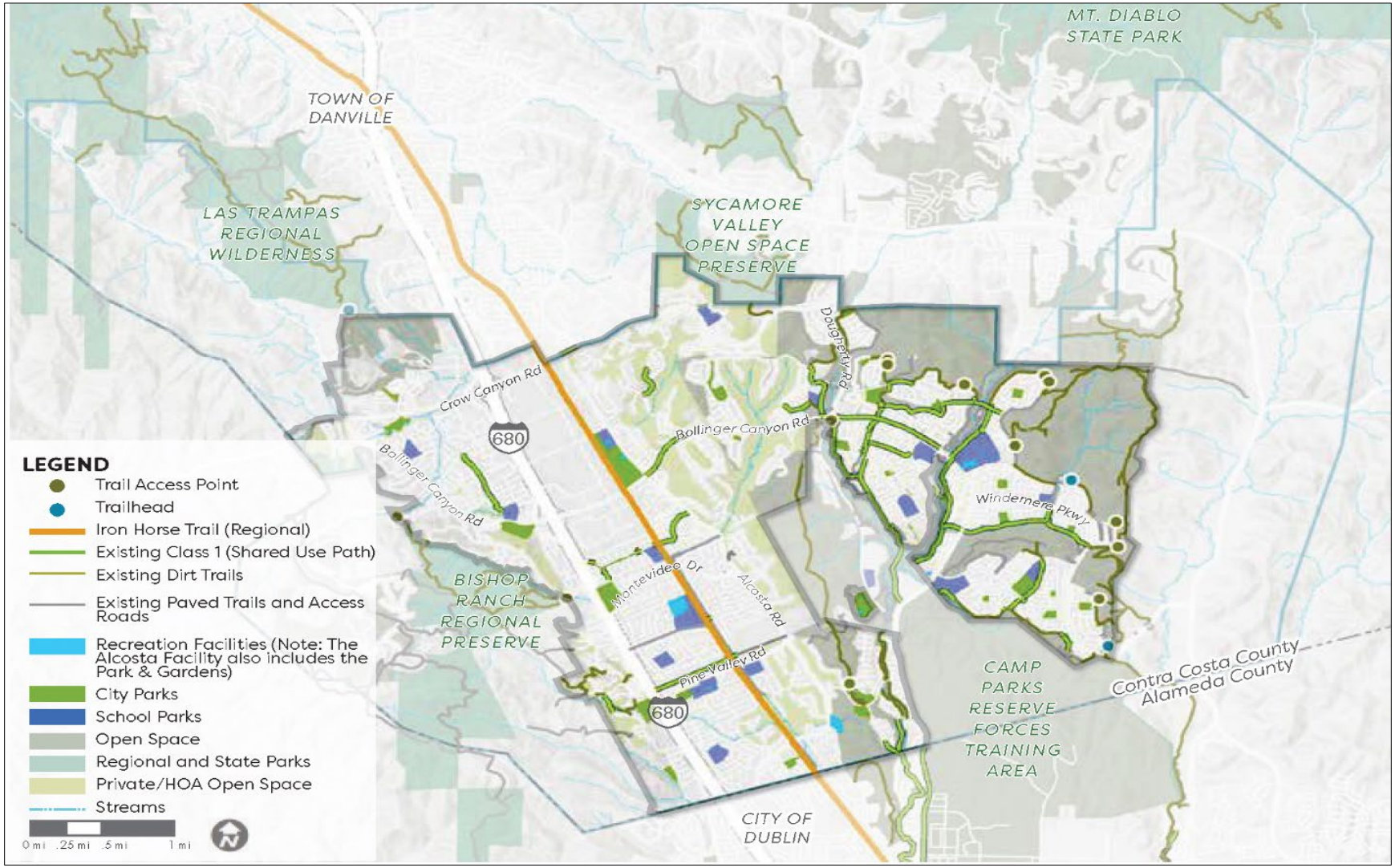
Source: San Ramon, City of. 2023. 2040 General Plan Parks and Recreation Element.

Figure 3.11-4 Existing Neighborhood, Community, and Specialty Parks



Source: San Ramon, City of. 2023. 2040 General Plan Parks and Recreation Element.

Figure 3.11-5 San Ramon Parks and Recreation System



Source: San Ramon, City of. 2023. 2040 General Plan Parks and Recreation Element

3.11.3 Regulatory Framework

Federal Regulations

National Fire Protection Association Codes and Standards

The National Fire Protection Association (NFPA) publishes 300 codes and standards intended to minimize the possibility and effects of fire and other risks. Among these codes and standards are specific policies designed for fire protection. These standards range from fire protection and life safety systems, standards for portable fire extinguishers to recreational vehicle standards.

State Regulations

California Health and Safety Code (Sections 13000 et seq.)

California Health and Safety Code Sections 13100–13135 establish State fire regulations, including regulations for building standards (also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Code of Regulations, Title 24 (California Building Standards Code)

The 2022 California Building Standards Code (CBC), contained in California Code of Regulations, Title 24, became effective January 1, 2023 and was adopted by the City of San Ramon on October 25, 2022 (Ordinance 516). Section 701A.3.2 of the CBC requires that new buildings located in any Fire Hazard Severity Zone in State Responsibility Areas, any Local Agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted, comply with all sections of the Chapter.

California Code of Regulations, Title 24, Part 9 (California Fire Code)

The 2022 California Fire Code, contained in Part 9 of California Code of Regulations, Title 24, incorporates by adoption the 2018 International Fire Code of the International Code Council, with California amendments, and became effective January 1, 2023. The City of San Ramon adopted the 2022 California Building Code on October 25, 2022 (Ordinance 516). The California Fire Code regulates building standards set forth in the CBC, fire department access, fire protection systems and devices, fire and explosion hazards safety, hazardous materials storage and use, and standards for building inspection. The California Fire Code also addresses dangerous conditions arising from the storage, handling, and use of hazardous materials and devices; conditions hazardous to life or property in the use or occupancy of buildings or premises; and provisions to assist emergency response personnel. The California Fire Code is updated and published every 3 years by the California Building Standards Commission.

California Constitution Article XIII, Section 35

Section 35 of Article XIII of the California Constitution was adopted by the voters in 1993 under Proposition 172. Proposition 172 directed the proceeds of a 0.50-percent sales tax to be expended exclusively for local public safety services. California Government Code Sections 30051-30056 provide rules to implement Proposition 172. Public safety services include police protection. Section 30056 provides that cities are not allowed to spend less of their own financial resources on their

combined public safety services in any given year compared to the 1992-93 fiscal year. Therefore, an agency is required to use Proposition 172 to supplement its local funds used on police protection, as well as other public safety services. Section 35 at subdivision (a)(2) provides: "The protection of public safety is the first responsibility of local government and local officials have an obligation to give priority to the provision of adequate public safety services." In City of Hayward v. Board of Trustees of California State University (2015) 242 Cal. App. 4th 833, the court found that Section 35 of Article XIII of the California Constitution requires local agencies to provide public safety services, including police protection, and that it is reasonable to conclude that the city will comply with that provision to ensure that public safety services are provided.

California Senate Bill 50

California Senate Bill 50 (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 the percentage of moveable classrooms in use.

California Government Code Section 65995(b) (Title 7, Chapter 4.9) and Education Code Section 17620

California Government Code Section 65995 authorizes school districts to collect impact fees from developers of new residential and commercial/industrial building space. Section 65995 was established under the School Facilities Act of 1986 and refined and amended by the SB 50 to provide further guidance and restrictions on fee limits and fee types. The maximum fees authorized under SB 50 apply to zone changes, general plan amendments, zoning permits, and subdivisions.

No fees are charged for new or expanded facilities that are under 500 square feet. The payment of school impact fees by developers are deemed to provide full and complete mitigation of school facilities impacts, notwithstanding any contrary provisions in CEQA or other State or local laws. SRVUSD determines fees annually in accordance with California Government Code Section 65995. Current SRVUSD development impact fees are shown below in Table 3.11-4.

Table 3.11-4 San Ramon Valley Unified School District Development Impact Fees

Development Type	Development Impact Fee (per square foot)
Residential	$4.79
Commercial and Industrial	$0.78

Source: San Ramon Valley Unified School District. 2023. Development Impact Fees. https://www.srvusd.net/Departments/Facilities/Development-Impact-Fees/index.html#:~:text=The%20increase%20becomes%20effective%20on,will%20be%20%244.79%20per%20sq. (accessed March 2023).

Local Regulations

San Ramon Municipal Code Section C1-171 (Fire Code)

San Ramon Municipal Code (SRMC) Section C1-171 adopts the 2022 California Fire Code and incorporates local amendments proposed by the City and San Ramon Valley Fire Protection District.

Local amendments include but are not limited to access requirements for fire apparatus, construction and renovation requirements, and operational permit requirements.

San Ramon Municipal Code Chapters II and IX

The City imposes development impact fees through Chapter II and Chapter IX to fully or partially offset the costs of public capital facilities and infrastructure that is needed to serve new demand created by development projects that derive from projects. Chapter II outlines traffic impact mitigation fees, which are intended to offset costs associated with traffic impacts caused by new development. Chapter IX of SRMC outlines park and recreation facility impact fees, which are assessed on the number of dwelling units proposed for development and would be paid by development applicants upon issuance of building permits.

Impact fees are different from, and apply in addition to, utility connection and planning application and building permit application fees, which are used to cover the cost of the City's processing for permits and direct utility costs. The City may also impose other fees or exactions imposed pursuant to the Subdivision Map Act, or other measures required to mitigate site-specific impacts of a development project, including, but not limited to, mitigations pursuant to CEQA; regulatory and processing fees; fees required pursuant to a development agreement; funds collected pursuant to a reimbursement agreement that exceed the applicant's share of public improvement costs; or assessment district proceedings, benefit assessments, or taxes.

City of San Ramon General Plan

The current San Ramon General Plan contains policies related to public services and recreation, but they would be replaced by the proposed 2040 General Plan.

3.11.4 Impacts and Mitigation Measures

Significance Criteria

The City of San Ramon utilizes the following 2023 CEQA Guidelines Appendix G significance criteria questions related to Public Services and Recreation.

Would the 2040 General Plan:

a) 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:
    1. Fire protection?
    2. Police protection?
    3. Schools?
    4. Parks?
    5. Other public facilities?

b) 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?

c) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Approach to Analysis

Fire and Police Services

Impacts on fire and police services were determined by evaluating the proposed plan's effect on existing fire and police station response times. Projected population associated with buildout of the proposed 2040 General Plan was also reviewed. In addition, fire and police (emergency) access to the plan areas was evaluated. Furthermore, impacts related to fire and police service were also based on information received in response to request letters sent to the respective service providers for input related to possible impacts.

School and Library Services

Impacts on schools were determined by evaluating the proposed plan's effect on existing school enrollment. Projected population and school enrollment data provided by the California Department of Education and SRVUSD were also reviewed. Furthermore, impacts related to schools and other public facilities (i.e., libraries) were also based on information received in response to request letters sent to the respective service providers for input related to possible impacts.

EIR Scoping Comments Consideration

No comments that pertain to public services or recreation were received in response to publication of the Notice of Preparation for this EIR.

Specific Significance Thresholds

For purposes of this analysis, the following thresholds are used to evaluate the significance of public service and recreation impacts resulting from implementation of the proposed plan:

- Result in additional population or activities requiring fire protection, police protection, school, or library services in a manner that necessitates the need for new or altered facilities, the construction of which would result in significant construction-related traffic air quality, greenhouse gas (GHG) emissions, or noise impacts. If new or altered facilities are proposed or determined to be needed, then determination of significance of construction-related transportation, air quality, GHG emissions, hazards, and noise impacts is based on the respective specific thresholds of significance listed in Section 3.12, *Transportation*; Section 3.2, *Air Quality*; Section 3.6, *Greenhouse Gas Emissions and Energy*; Section 3.7, *Hazards, Hazardous Materials, and Wildfire*; and Section 3.10, *Noise*.
- Result in additional population using recreational facilities and causing physical deterioration of such facilities.
- Result in additional population creating need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable recreational facilities per capita ratio (specifically 6.5 acres of park per 1,000 persons).

Impact Evaluation

New or Altered Fire Protection Facilities

Significance Criterion a1:	Would the proposed plan result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the 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?

Impact PS-1 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD INCREASE THE POPULATION OF SAN RAMON, GENERATING ADDITIONAL NEED FOR FIRE PROTECTION SERVICES. HOWEVER, COMPLIANCE WITH THE 2040 GENERAL PLAN WOULD RESULT IN IMPACTS RELATED TO THE NEED FOR NEW OR ALTERED FIRE FACILITIES THAT ARE LESS THAN SIGNIFICANT.

Construction

The 2040 General Plan would allow a net increase of approximately 10,155 residential units and facilitate the addition of 26,269 net new residents in San Ramon. As a result, SRVFPD could need to incrementally increase their fire protection services to the City of San Ramon through the year 2040, which could in turn require the construction of new facilities to accommodate subsequent personnel, equipment, and vehicles. If construction or expansion of future facilities are needed or proposed, then separate environmental review would be required that could determine and require future project-specific construction-related mitigation measures. The 2040 General Plan would facilitate development within areas of San Ramon that are currently developed. As such, construction of new fire protection facilities, if required, would likely occur on property previously disturbed or developed and, thus, within the programmatic analysis for buildout under the 2040 General Plan as analyzed throughout this EIR. Additionally, construction would be required to comply with all applicable federal, State, and local regulations governing the provision of fire protection services, including adequate fire access, fire flows, and number of hydrants. This includes the 2022 California Fire Code or its latest iteration, which contains project-specific requirements such as construction standards in new structures and remodels, road widths and configurations designed to accommodate the passage of fire trucks and engines, and requirements for sprinkler systems and minimum fire flow rates for water mains. The SRVFPD reviews site plans, construction plans, and architectural plans prior to occupancy to ensure the required fire protection safety features, including building sprinklers and emergency access, are implemented. Development with modern materials and following current standards, inclusive of fire-resistant materials, fire alarms and detection systems, automatic fire sprinklers, would enhance fire safety and would support fire protection services (Title 24, California Code of Regulations, Part 9). This would reduce the potential for adverse construction impacts associated with construction of new or expanded fire facilities associated with implementation of the 2040 General Plan. Therefore, construction impacts related to potential need for new or expanded fire protection facilities would be less than significant.

Operation

As future buildout occurs under the 2040 General Plan, SRVFPD would evaluate operations and deployment of services to efficiently use resources. Additionally, new development under buildout of the 2040 General Plan would be required to comply with all applicable Federal, State, and local

regulations governing the provision of fire protection services, including adequate fire access, fire flows, and number of hydrants. This includes the 2022 California Fire Code or its latest iteration, which contains project-specific requirements such as construction standards in new structures and remodels, road widths and configurations designed to accommodate the passage of fire trucks and engines, and requirements for sprinkler systems and minimum fire flow rates for water mains. Further, the 2040 General Plan would allow approximately 10,155 residential units and facilitate the addition of 26,269 net new residents in the 2040 General Plan area, which would increase the demand for fire protection services. As a result, SFVFPD would need to incrementally increase their fire services to the City of San Ramon through the year 2040.

In addition, the 2040 General Plan Growth Management Element and Public Facilities and Utilities Element contain a number of goals and associated policies, listed below, for providing adequate fire protection services in San Ramon.

GROWTH MANAGEMENT ELEMENT

Guiding Policy 3.1-G-1: Manage the City's growth in a way that balances existing and planned transportation facilities, protection of open space, creeks, and ridgelines, provision of diverse housing options, and the preservation of high quality community facilities and services.

Policy 3.3-I-4 As part of the development review process, consider the City's ability to provide public services through the use of adopted performance guidelines.

Policy 3.3-I-7 Allow urban development only within the City's Urban Growth Boundary (see Implementing Policies 4.6-I-1 through 4.6-I-5) and only in accord with a plan for full urban services (police, fire, parks, water, sanitation, streets and storm drainage) to which all providers are committed.

PUBLIC FACILITIES AND UTILITIES ELEMENT

Guiding Policy 7.3-G-1: Encourage development of private educational, cultural, childcare, and medical facilities in San Ramon.

Policy 7.3-I-8 Encourage and support public facilities and services that contribute to the maintenance and long-term success of community medical service facilities.

Policy 7.3-I-9 Encourage uses which support the medical facilities within proximity of community medical service facilities.

Guiding Policy 7.6-G-1: Collaborate with the San Ramon Valley Fire Protection District to deliver a high level of public protection services that protect life, property, and the environment.

Policy 7-6-I-1 Continue to coordinate with the San Ramon Valley Fire Protection District to provide adequate fire protection facilities and services to meet the needs of the community.

Policy 7-6-I-2 Seek input from the San Ramon Valley Fire Protection District to ensure that fire protection measures are identified during the development review process.

Consistent with Policy 3.3-I-7, as future buildout occurs under the 2040 General Plan, the City would evaluate operations and deployment of services to efficiently use resources and ensure that development does not exceed the service capacity of SFVFPD. As such, there is potential for SRVFPD to increase staffing levels through the year 2040 to meet established standards under buildout of

the 2040 General Plan. Because the 2040 General Plan regulates the provision of fire protection services concurrently with development and population growth, operational impacts related to provision of fire protection services would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

New or Altered Police Protection Facilities

Significance Criterion a2:	Would the proposed plan result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the 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?

Impact PS-2 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD INCREASE POPULATION IN SAN RAMON, GENERATING ADDITIONAL NEED FOR POLICE PROTECTION SERVICES. HOWEVER, COMPLIANCE WITH 2040 GENERAL PLAN POLICIES WOULD RESULT IN IMPACTS RELATED TO THE NEED FOR NEW OR ALTERED POLICE FACILITIES THAT ARE LESS THAN SIGNIFICANT.

Construction

The 2040 General Plan would allow a net increase of approximately 10,155 residential units and facilitate the addition of 26,269 net new residents in San Ramon. As a result, SRPD and CCCOS could need to incrementally increase their police services through the year 2040, which could in turn require the construction of new facilities to house subsequent personnel, equipment, and vehicles. If construction or expansion of future facilities are needed or proposed, separate environmental review would be required that could determine and require future project-specific construction-related mitigation measures. The 2040 General Plan would facilitate development within areas of San Ramon that are currently developed. Therefore, construction of new police facilities, if required, would likely occur on property previously disturbed or developed, and, thus, within the programmatic analysis for buildout under the 2040 General Plan as analyzed throughout this EIR. This would reduce the potential for adverse construction impacts associated with construction of new or expanded police protection facilities associated with implementation of the 2040 General Plan. Therefore, construction impacts related to potential need for new or expanded police protection facilities would be considered less than significant.

Operation

As future buildout occurs under the 2040 General Plan, the City would evaluate operations and deployment of services to efficiently use resources. New development under buildout of the 2040 General Plan would be required to comply with all applicable federal, State, and local regulations governing the provision of police protection services, including adequate emergency access and community safety measures. Further, the 2040 General Plan would allow approximately 10,155

residential units and facilitate the addition of 26,269 net new residents in San Ramon. As a result, SRPD and CCCOS would need to incrementally increase their police services through the year 2040.

In addition, 2040 General Plan Growth Management Element policies 3.3-I-4 and 3.3-I-7 and the Public Facilities and Utilities Element goals and associated policies, listed below, ensure adequate police protection services in San Ramon.

Guiding Policy 7.7-G-1: Maintain a high level of public safety for all people who live or work in San Ramon.

- **Policy 7.7-I-1** Ensure crime-reduction and public safety features are incorporated into the design of new development projects through the Crime Prevention Through Environmental Design program (CPTED).
- **Policy 7.7-I-2** Monitor new development projects in the unincorporated parts of the San Ramon Planning Area that would require law enforcement services from the City.
- **Policy 7.7-I-3** Require new development, if appropriate, to provide a funding mechanism to support and maintain San Ramon's high level of police services, such as a Community Facilities District.

Consistent with Policies 3.3-I-7, 7.7-I-2, and 7.7-I-3, as future buildout occurs under the 2040 General Plan, the City would evaluate operations and deployment of services to efficiently use resources and ensure that development does not exceed the service capacity of SFVFPD. As such, there is potential for SRPD and CCCOS to increase staffing levels through the year 2040 to meet established standards under buildout of the 2040 General Plan. Because the 2040 General Plan regulates the provision of police protection services concurrently with development and population growth, operational impacts related to provision of police protection services would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

New or Altered School Facilities

Significance Criterion a3:	Would the proposed plan result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

Impact PS-3 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD RESULT IN AN INCREASE IN POPULATION OF SCHOOL-AGED CHILDREN IN SAN RAMON. THIS WOULD INCREASE DEMAND FOR SCHOOL SERVICES AND POTENTIALLY CREATE THE NEED FOR NEW SCHOOL FACILITIES. OPERATIONAL IMPACTS OF NEW SCHOOL FACILITIES WOULD BE LESS THAN SIGNIFICANT WITH PAYMENT OF SCHOOL IMPACT FEES.

Construction

The 2040 General Plan would allow a net increase of approximately 10,155 residential units and facilitate the addition of 26,269 net new residents in San Ramon. As shown in Table 3.11-1, most SRVUSD schools in the General Plan area are near or slightly below capacity, with three schools currently slightly over capacity. As a result, SRVUSD could need to incrementally increase their school services to San Ramon through the year 2040, which could in turn require the construction of new facilities to accommodate subsequent students, staff, and facility space. If construction or expansion of future facilities are needed, separate environmental review would be required, which could result in development and implementation of future project-specific construction-related mitigation measures. The 2040 General Plan facilitates development within areas of San Ramon that are currently developed. Therefore, construction of new school facilities, if required, would likely occur on property previously disturbed or developed and, thus, within the programmatic analysis for buildout under the 2040 General Plan as analyzed throughout this EIR. This would reduce the potential for adverse construction impacts associated with construction of new or expanded school facilities associated with implementation of the 2040 General Plan. Therefore, construction impacts related to potential need for new or expanded school facilities would be considered less than significant.

Operation

Table 3.11-5 summarizes the potential increase in student population for SRVUSD that could occur as a result of the 2040 General Plan, using the generation rates identified in Table 3.11-2. The number of single-family detached, single-family attached, or multi-family dwelling units that would make up the 10,155 housing units facilitated by the General Plan is not known at this time; therefore, the greatest student generation rates (single-family detached unit rate) was used to provide a conservative analysis.

Table 3.11-5 2040 General Plan Student Generation

Generation Rates (students per single family detached dwelling unit, by grade level)			Number of Units Facilitated by 2040 General Plan	Number of Students Generated (by grade level)		
K – 5	**6 – 8**	**9 – 12**		**K – 5**	**6 – 8**	**9 – 12**
0.25	0.18	0.32	10,155	2,556	1,669	2,610
Total					**6,835**	

As shown above in Table 3.11-5, buildout of the 2040 General Plan would add approximately 6,835 students to SRVUSD by 2040.

Although SRUVSD has experienced a decline in enrollment in the last several years, the addition of 6,835 school students within San Ramon would exceed total school district capacity. Such potential additional students would increase enrollment in schools in San Ramon.

The 2040 General Plan Public Facilities and Utilities Element contains goals and policies specific to education and the provision of school facilities:

Guiding Policy 7.2-G-1: Collaborate with the San Ramon Valley Unified School District in their efforts to ensure that all school age children have equal access to equitable facilities.

- **Policy 7.2-I-1** Collaborate with the San Ramon Valley Unified School District to ensure that all future public school sites are developed in partnership with the City as a public "school park."
- **Policy 7.2-I-2** Continue to partner with Diablo Valley College (DVC) to support community access at the DVC – San Ramon Campus Library to meet the needs of the Facility, Students, and Community.
- **Policy 7.2-I-3** Maintain after school teen services on or adjacent to middle school sites.
- **Policy 7.2-I-4** Collaborate with the San Ramon Valley Unified School District to assure that all future schools are planned to be open and operational based on student generation rates.

Consistent with Policies 7.2-I-4 and 7.2-I-1, the City would coordinate with SRVUSD on long-range planning efforts to facilitate SRVUSD planning for future growth. As such, the City would work with SRVUSD regarding new school land use needs by grade to ensure that new school facilities would accommodate anticipated student generation within San Ramon associated with 2040 General Plan buildout. Further, all future development facilitated by 2040 General Plan is required to pay SRVUSD school impact fees which, pursuant to Section 65995(3)(h) of the California Government Code (Senate Bill 50, chaptered August 27, 1998), are "deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization." Because the 2040 General Plan regulates the provision of school services concurrently with 2040 General Plan development and population growth and with payment of mandatory SRVUSD school impact fees by developers for future projects in San Ramon, operational impacts related to provision of school services would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

New or Altered Parks/Recreational Facilities

Significance Criterion a4:	Would the proposed plan result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?
Significance Criterion b:	Would the proposed plan 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?
Significance Criterion c:	Does the proposed plan include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Impact PS-4 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD RESULT IN AN INCREASE IN SAN RAMON POPULATION. THIS WOULD INCREASE DEMAND FOR AND USE OF PARKS AND POTENTIALLY CREATE THE NEED FOR NEW OR ALTERED PARK AND RECREATIONAL FACILITIES. HOWEVER, COMPLIANCE WITH 2040 GENERAL PLAN POLICIES WOULD RESULT IN IMPACTS RELATED TO INCREASED USE OR THE NEED FOR NEW OR ALTERED PARKS OR RECREATIONAL FACILITIES THAT ARE LESS THAN SIGNIFICANT.

Construction

The 2040 General Plan would allow a net increase of approximately 10,155 residential units and facilitate the addition of 26,269 net new residents in San Ramon, but the proposed 2040 General Plan does not include designation of additional land for parks, recreational facilities, or open space within San Ramon. Consequently, existing parks and recreational facilities in San Ramon could be used more frequently and potentially deteriorate at an accelerated pace, and the SRPCSD could need to incrementally increase their parks and recreational services through the year 2040, which could in turn require the construction of new facilities to accommodate subsequent recreational visitors and facility space. If construction or expansion of future facilities are needed, then separate environmental review would be required that could determine and require future project-specific construction-related mitigation measures. The 2040 General Plan would facilitate development within areas of San Ramon that are currently developed. Therefore, construction of new parks and recreational facilities, if required, would likely occur on property previously disturbed or developed and, thus, within the programmatic analysis for buildout under the 2040 General Plan as analyzed throughout this EIR. This would reduce the potential for adverse construction impacts associated with construction of new or expanded parks and recreational facilities associated with implementation of the 2040 General Plan. Therefore, construction impacts related to potential need for new or expanded parks and recreational facilities would be considered less than significant.

Operation

SRPCSD currently maintains 66 parks totaling approximately 395.4 acres. Currently, there are approximately 4.72 acres of parkland per 1,000 residents in San Ramon, which is short of the City's guideline to provide 6.5 acres of parkland per 1,000 residents. [18] As discussed in Section 3.9, *Land*

[18] San Ramon, City of. 2019. San Ramon Parks, Trails, Open Space, and Recreation Master Plan. https://cdn5-hosted.civiclive.com/UserFiles/Servers/Server_10826046/File/Our%20City/Departments/Parks%20&%20Comm%20Srvs/Department%20Information/Master%20Plan/2020%20Master%20Plan/San%20Ramon%20PTOSR%20Master%20Plan_FINAL.pdf (accessed March 2023).

Use Planning, Population, and Housing, the 2040 General Plan would add approximately 10,155 net new residential units to San Ramon, which would support approximately 26,269 net new residents. The current (January 2022) population of San Ramon is 83,820, and the proposed plan would result in a population of approximately 110,089 by 2040; thus, the 2040 General Plan would result in a ratio of 6.0 acres of developed parkland per 1,000 residents (669.03 acres of parkland divided by approximately 110,089 residents). This would be below the City's guideline ratio of 6.5 acres of developed parkland per 1,000 residents. As such, implementation of the 2040 General Plan would require the development of additional parkland to help attain the City's established parkland to population ratio.

The 2040 General Plan would not include designation of additional land for parks or recreational facilities within San Ramon. The Land Use Element, Traffic and Circulation Element, Parks and Recreation Element, and Open Space and Conservation Element of the 2040 General Plan include the goals and policies related to parks and recreation. Guiding policies and implementing policies from the 2040 General Plan related to park land, access, and recreation are as follows:

LAND USE ELEMENT

Guiding Policy 4.6-G-1: Foster a pattern of development that enhances the existing character of the City, and encourages land use concepts that contribute to the design of the community.

- **Policy 4.6-I-11** Provide high quality public facilities, services, and other amenities within close proximity to residents.
- **Policy 4.6-I-14** Require Clustered Development for four or more units that will maximize preservation of visible open space and encourage preservation of open space by allowing density to increase based on the percentage of the gross area permanently preserved as open space.
- **Policy 4.6-I-24** Continue to refine objective design standards for mixed use development that will result in pedestrian-scaled environments, with one-to-four story buildings, integrated parking, streetfront windows, and entries, and public and private open space or as provided under a separate Specific Plan process.

Guiding Policy 4.8-G-1: Maintain and enhance San Ramon's identity.

- **Policy 4.8-I-6** Seek to assure maximum public access to the Iron Horse Trail through land acquisition, licensing agreements with Contra Costa County, incentives for dedication, overhead trail crossings and improvement of land for trailhead parks and walkways.
- **Policy 4.8-I-18** As part of development proposals, encourage public access to creeks as scenic visual and passive recreational amenities in a manner consistent with need of applicable resource agencies to provide creek and habitat protection.
- **Policy 4.8-I-19** Continue to provide park and recreational amenities that combine well-designed buildings, recreational equipment and playing fields, and complementary landscaping at key locations throughout the City.

TRAFFIC AND CIRCULATION ELEMENT

Guiding Policy 5.7-G-1: Encourage bicycling and walking as alternatives to driving, consistent with Complete Streets concepts.

Policy 5.7-I-3 Continue to emphasize the Iron Horse Trail as a major north-south route for non-motorized modes of transportation including walking, biking, rollerblading and scooters by improving connectivity and enhancing amenities for these modes.

Policy 5.7-I-4 Encourage future development along the Iron Horse Trail corridor to provide connection points and adjacent amenities, as appropriate.

PARKS AND RECREATION ELEMENT

Guiding Policy 6.5-G-1: Create and maintain a high-quality publicly accessible park and trail system for San Ramon.

Policy 6.5-I-1 Maintain a guideline of 6.5 acres of public parks per 1,000 residents at General Plan buildout.

Policy 6.5-I-2 Provide varied community park and recreational opportunities accessible to all City residents.

Policy 6.5-I-3 Maintain a minimum size of 2 acres or more for neighborhood parks.

Policy 6.5-I-4 Provide passive and active recreational amenities within the City's parks to meet the needs of citizens of all ages and interests.

Policy 6.5-I-5 Require residential developers to make dedications of land, improvements, and/or in-lieu fees to the City's park and trail system.

Policy 6.5-I-6 Encourage contributions to the City's park and trail system by non-residential developers.

Policy 6.5-I-7 Encourage property owners in the City Core to implement the Interconnected Opportunities of the San Ramon Parks, Open Space, Trails, and Recreation Master Plan and the Walking District Master Plan which provides the long-term vision for pedestrian-oriented access and connectivity.

Policy 6.5-I-8 Complete all parkland dedication requirements for each development prior to final occupancy.

Policy 6.5-I-9 Encourage the development of landscaped and dedicated public spaces, parkways, trail systems, and special community service recreational facilities in new developments.

Policy 6.5-I-10 Collaborate with the San Ramon Valley Unified School District to promote continued joint development and use of school sites and facilities located within the City and its Sphere of Influence.

Policy 6.5-I-11 Seek partnership opportunities with the private sector and with other public agencies to enhance park facilities and provide recreational activities.

Policy 6.5-I-13 Seek opportunities to preserve and protect open space, ridge lands, and scenic corridors in and around San Ramon.

Policy 6.5-I-14 Designate Big Canyon within the Westside subarea as a nature preserve and seek to add it to the City's park system as a specialized recreation area with limited access.

Policy 6.5-I-15 Continue to review annually and update every five years the 10-year Parks and Community Services Master Plan.

Policy 6.5-I-16 Maintain service levels and maintenance standards in parks and recreation facilities at optimal levels for public use, safety, and cost effectiveness.

Policy 6.5-I-17 Increase the connectivity to the Iron Horse Trail and the regional/city trail network, including the installation of bicycle/pedestrian overcrossing(s), seating, and shade structures as described in the San Ramon Valley Iron Horse Trail Corridor Concept Plan.

Policy 6.5-I-18 Encourage new development to provide Public Spaces to enhance the recreation or leisure interactive experience of residents or visitors for passive or active use. The City may allow for partial or full parkland dedication credit for these types of Public Spaces based on City need and community benefit to the general public.

OPEN SPACE AND CONSERVATION ELEMENT

Guiding Policy 8.3-G-1: Protect and maintain the quality of biological resources in the San Ramon City Limits, while also balancing the needs of growth and development.

Guiding Policy 8.3-G-2: Strengthen the City's partnership with East Bay Regional Parks District, Contra Costa County, other jurisdictions and private organizations to expand the ridgeline and hillside open space system in the city.

Policy 8.3-I-3 Explore opportunities to preserve significant creek, riparian areas, sensitive natural communities, and prominent topographic features as open space.

Policy 8.3-I-4 Require maintenance plans for open space areas in new development proposals, including identified natural resources such as ridges and waterways.

Policy 8.3-I-8 Encourage public access to creek corridors.

Policy 8.3-I-16 Preserve ridgelines as open space, except for ridgelines that may be altered, as shown in Figure 8-3.

Policy 8.3-I-17 Preserve hillsides steeper than 20 percent slope as open space, except for slopes and ridgelines that may be altered, as shown in Figure 8-3.

Guiding Policy 8.4-G-1: Support regional efforts to expand the ridgeline and hillside open space system through joint efforts with East Bay Regional Parks District, Contra Costa County and nonprofit trustee agencies.

Policy 8.4-I-1 Confer with appropriate agencies and organizations in the creation of an institutional framework and financing mechanisms necessary to acquire additional ridgeline areas and agricultural lands, and to preserve, restore, and manage important open space.

Policy 8.4-I-2 Encourage developers to explore Transfer of Development Rights (TDRs) in conjunction with project review to cluster residential development and preserve open space, ridgelines, and creek corridors.

Policy 8.4-I-3 Utilize GHADs and/or other secure funding mechanisms for open space to assist in the acquisition and on-going management, operation, and maintenance of a ridgeline and hillside open space system.

Policy 8.4-I-4 Continue to support the efforts of the Open Space Advisory Committee to recommend measures to protect and preserve Open Space in and contiguous to San Ramon.

Policy 8.4-I-6 Use open space in new development to create buffers that delineate the edge of urban areas.

Policy 8.4-I-7 Encourage the restoration of open space areas as part of new development projects, as appropriate.

Policy 8.4-I-8 Explore funding opportunities to restore habitat on publicly owned open space and to provide assistance, where appropriate, to owners of privately owned land dedicated as permanent open space, to facilitate private restoration effects.

Policy 8.4-I-9 Prioritize the preservation of open space on lands that are for sale, proposed for development, or can be acquired that have high biological and ecological value, contiguous to existing open space properties or public lands, and provide recreational opportunities such as trail connections.

Policy 8.4-I-10 Continue planning and managing ridgelines, agricultural lands, and open space acquired by the City or other Open Space areas through the Geologic Hazard Abatement District(s) and the Dougherty Valley Open Space Management Plan.

Policy 8.4-I-11 Provide incentives for clustering of allowable residential use on infill open space sites to avoid unnecessary grading and site development inconsistent with General Plan policies for open space and resource conservation.

Policy 8.4-I-12 Confer, through the development review process, with appropriate agencies and organizations to create a connecting region-wide open space system using instruments such as land dedication or public access easements.

Policy 8.4-I-13 Allow appropriate and beneficial improvements on open space lands, subject to standards for environmental protection; city hillside, ridgeline, and creek regulations; avoidance of hazards; and building siting and design that will preserve the open space character of the site. Improvements may include work related to the Geologic Hazard Abatement District, trails, or replanting of native plants.

Guiding Policy 8.5-G-1: Encourage the continuation of appropriate agricultural activities within the City's Planning Area, while being cognizant that such uses may transition to non-agricultural uses in the future.

Policy 8.5-I-5 Designate land for rural conservation along the west side of Bollinger Canyon Road near the Las Trampas Regional Wilderness in order to preserve visual open space, to provide opportunities for horse-keeping and part-time ranching, and to maintain compatibility with adjoining agricultural uses.

Consistent with Policies 6.5-I-1 through 6.5-I-18, the City would continue to plan for parks and recreational facilities through the year 2040. Policy 6.5-I-1 would facilitate the addition of parkland in San Ramon in a manner that would meet the City's guideline of 6.5 acres of developed parkland per 1,000 residents, at General Plan buildout. Additionally, consistent with Goals 8.3-G-1 through 8.5-G-1 and related policies, the City would encourage preservation of open spaces, hillsides, creeks, and other natural features and maintenance of open space and natural areas within the General Plan area. These policies would increase the amount of parkland available to City residents. The provision of parkland in accordance with the City's standard would ensure that substantial physical deterioration of existing parks would not occur or be accelerated.

Because the 2040 General Plan and the Municipal Code regulate provision of parkland concurrently with development and population growth and because of substantial parkland available immediately outside of City limits and with payment of mandatory parkland impact fees by developers for future projects in the city, operational impacts related to provision of, access to, and potential deterioration of parks and recreation facilities would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Need for New or Altered Library Facilities

Significance Criterion a5:	Would the proposed plan result in substantial adverse physical impacts associated with the provision of new or physically altered public facilities, or the need for new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

Impact PS-5 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD RESULT IN AN INCREASE IN THE CITY'S POPULATION. THIS WOULD INCREASE DEMAND FOR PUBLIC FACILITIES, SPECIFICALLY LIBRARIES, AND POTENTIALLY CREATE THE NEED FOR NEW LIBRARIES. HOWEVER, COMPLIANCE WITH 2040 GENERAL PLAN POLICIES WOULD RESULT IN IMPACTS RELATED TO NEED FOR NEW OR ALTERED PUBLIC FACILITIES THAT ARE LESS THAN SIGNIFICANT.

Construction

The 2040 General Plan would allow approximately 10,155 residential units and facilitate the addition of 26,269 net new residents in San Ramon. The proposed 2040 General Plan does not include designation of additional land for libraries or other public facilities within the City that would require construction and might have an adverse physical effect on the environment. Contra Costa County Libraries could need to incrementally increase their library services to the City of San Ramon through the year 2040, which could in turn require the construction of new facilities to accommodate subsequent library visitors and facility space. If construction or expansion of future facilities are needed or proposed, separate environmental review would be required that could determine and require future project-specific construction-related mitigation measures. The 2040 General Plan would facilitate development within areas of San Ramon that are currently developed. Therefore, construction of new library facilities, if required, would likely occur on property previously disturbed or developed and, thus, within the programmatic analysis for buildout under the 2040 General Plan as analyzed throughout this EIR. This would reduce the potential for adverse construction impacts associated with construction of new or expanded library facilities associated with implementation of the 2040 General Plan. Therefore, construction impacts related to potential need for new or expanded library facilities would be considered less than significant.

Operation

The 2040 General Plan would facilitate the addition of approximately 26,269 residents in San Ramon. An increase in population would increase demand for public facilities.

In addition to 2040 General Plan goals and policies already listed in this section, Land Use Element Policies 4.6-I-11 and 4.6-I-14 and the following Public Facilities and Utilities Element goal and policy support enhancement of San Ramon existing public facilities and encourage adaptations in the future to meet San Ramon's public facilities, including library, needs:

Guiding Policy 7.1-G-1: Provide public and cultural facilities that contribute to the City's positive image and enhance community identity.

Policy 7.1-I-1 Confer with Contra Cost County Library to provide adequate services including facility upgrades and enhancements in response to community needs.

Implementation of these and the aforementioned goals and policies included in the 2040 General Plan would ensure that that adequate public facilities, including fire, police, public school, recreation, and library facilities, are planned to support current and future residents of San Ramon. Policies 4.6-I-11, 5.6-I-14, and 7.1-I-1 would support the provision of public services proximate to residents, the preservation and maximation of open space, and ensure provision of library services to residents, respectively. Therefore, operational impacts related to public facilities, including libraries, associated with development facilitated by the 2040 General Plan would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

3.11.5 Cumulative Impacts

The geographic scope of the cumulative public services analysis is the service areas of the SRVFPD, SRPD, CCCOS, SRVUSD, SRPCSD, and the Contra Costa County Library system. In addition, the geographic scope of the cumulative recreation analysis consists of the local community and regional parks within the boundary of the City of San Ramon and include parks and recreational facilities managed by EBRPD. Because of differences in the nature of the public service topical areas, they are discussed separately. The cumulative analysis considers the nearby past, present, and reasonably foreseeable future plans and projects listed in Table 3-1 (refer to Chapter 3, *Environmental Impact Analysis*) located in San Ramon, Danville, and Contra Costa County, in addition to the proposed plan.

Fire Protection Facilities

The SRVFPD service area consists of 155 square miles in the central portion of Contra Costa County, including the city of San Ramon, communities of Alamo, Blackhawk, the Towns of Danville and Diablo, and portions of Morgan Territory and the Tassajara Valley. Cumulative development in San Ramon would result in predominantly residential and commercial development. These types of development would increase the permanent resident and daytime population of the city. The increase in population would result in an increased demand for fire protection facilities. However, the need for fire protection services is gradual as development occurs. To help offset the increased demand, the cumulative plans and projects would be required to pay all applicable review and development impact fees to the SRVFPD. Cumulative developments would be in compliance with the California Fire Code, Part 9 of the CBC and would follow standards for fire safety such as fire flow requirements for buildings, fire hydrant location and distribution criteria, automated sprinkler systems, and fire-resistant building materials. For these reasons, the cumulative projects would not result in the need to construct new or expand existing fire protection or emergency medical services facilities beyond those anticipated for expected population growth. Therefore, the cumulative impact related to fire protection facilities would be less than significant.

Police Protection Facilities

The city of San Ramon is served by SRPD, and the General Plan area outside of City limits is served by CCCOS. Cumulative development in San Ramon would result in predominantly residential and commercial development. These types of development would increase the permanent resident and daytime population. The increase in population and development would result in an increased demand for police protection facilities. Cumulative plans and projects within the service area of the SRPD and CCCOS would be reviewed for impacts on police protection services, would be required to address any potential impacts with mitigation, and would need to provide adequate emergency access for police services with proper signage and lighting. Because demand for law enforcement services is highly dependent on a number of factors that vary substantially by project (clientele, hours of operation, crime prevention measures, etc.), it is unlikely that there would be substantial overlap in demand that would result such that new facilities are necessary. Therefore, the cumulative impact related to police protection facilities would be less than significant.

School Facilities

SRUSD provides public school services to San Ramon, as well as the Town of Danville and the unincorporated communities of Alamo, Diablo, and Blackhawk. Cumulative projects would result in predominantly residential and commercial development; residential development would increase permanent population, increasing demand for school facilities. Implementation of the 2040 General

Plan, in addition to the planning documents of Danville, Alamo, Diablo, Blackhawk, and Contra Costa County, would also add residential units to their respective plan areas and would result in an increase in school-aged residents. Cumulative projects would be required to pay development impact fees towards school operation which, pursuant to Section 65995(3)(h) of the California Government Code (Senate Bill 50, chaptered August 27, 1998), are "deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization." Therefore, the cumulative impact related to school facilities would be less than significant.

Library Facilities

The geographic scope for the cumulative analysis of other public facilities analysis is the service area of the Contra Costa County Library system, which includes the existing San Ramon and Dougherty Station libraries. Cumulative plans and projects, mainly the residential projects, may also result in the increase in library use. Contra Costa County Libraries could need to incrementally increase their library services to Contra Costa County through the year 2040, which could in turn require the construction of new facilities to accommodate subsequent library visitors and facility space. The proposed plan in conjunction with other cumulative plans and projects listed in Table 3-1 would facilitate development in areas that are currently developed; therefore, construction of new Contra Costa County Libraries facilities, if required, would likely occur on property previously disturbed or developed. This would reduce the potential of adverse construction impacts associated with construction of new or expanded library facilities. Therefore, the cumulative impact related to library facilities would be less than significant.

Recreation and Park Facilities

The implementation of the proposed plan in conjunction with the cumulative plans and projects listed in Table 3-1 would result in residential and commercial developments in and near San Ramon. Such cumulative development would be expected to permanently increase residents, which would increase cumulative demand for park facilities. The greater use of parks and recreational facilities in San Ramon could result in physical deterioration of existing parks. However, population growth is only one factor in determining whether parks and recreational facilities would deteriorate through increased use. Other variables include park design, age, infrastructure, and park use. To further offset demand, the cumulative plans and projects would be required to demonstrate compliance with applicable design guidelines established in the proposed 2040 General Plan. In addition, cumulative development would be subject to parkland dedication requirements or in-lieu parkland fees. San Ramon also continues to retain, enhance, and expand park and recreation facilities throughout the City limits, as well as continues to assess its current and future park needs. With payment of park impact fees by cumulative development, there would be limited potential physical deterioration of existing parks and recreational facilities due to increased use. Therefore, the cumulative impact related to recreational and park facilities would be less than significant.

Overall Level of Cumulative Significance

Less than significant

3.12 Transportation

3.12.1 Introduction

This section describes existing conditions related to roadway, transit, bicycle, and pedestrian circulation systems, as well as the relevant regulatory framework. This section also evaluates impacts of the 2040 General Plan related to the potential for conflict with existing programs, plans, ordinances, or policies addressing the circulation system; conflict with *CEQA Guidelines* Section 15064.3(b); increase hazards due to geometric design features; or result in inadequate emergency access. The information in this section is primarily based on the findings of the San Ramon 2040 General Plan Transportation Impact Assessment (TIA) Report, which is included as Appendix E to this EIR.

3.12.2 Environmental Setting

Roadway System

There is a natural hierarchy of streets in San Ramon that provide various levels of access and mobility, with regional highways (e.g., Interstate 680 [I-680]) accommodating the highest volumes and speeds, major cross-town arterial streets connecting to freeways and operating at moderate speeds and/or volumes, and local collector roads that link neighborhoods, parks, and schools to the cross-town streets and to each other, with many of these serving adjacent development and neighborhoods.

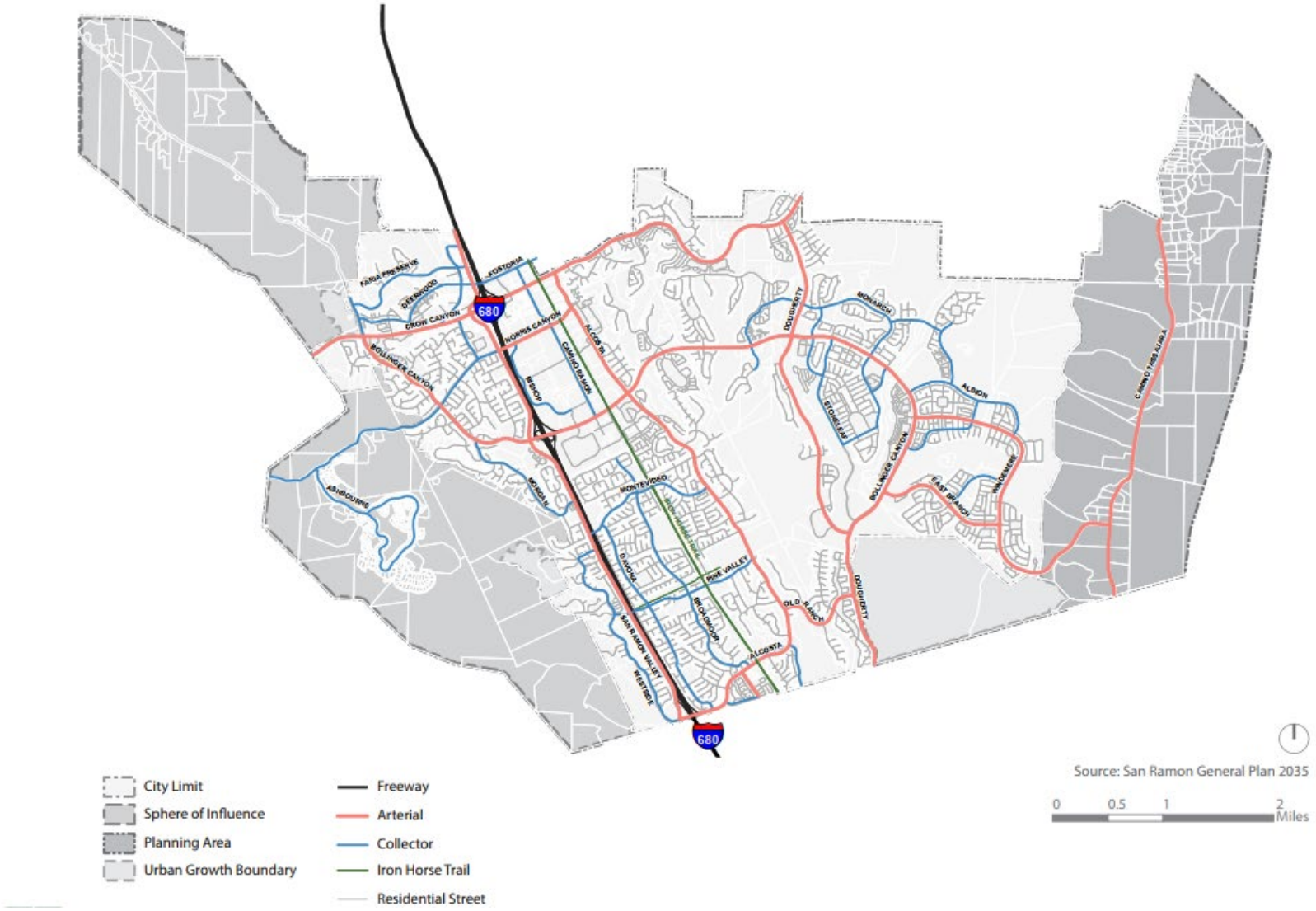
Regional Highway

I-680 is the primary route connecting San Ramon (the plan area) to the region. I-680 is a north-south freeway that generally runs along the western edge of San Ramon and connects I-580 in Dublin to State Route (SR) 24 in Walnut Creek. Figure 3.12-1 presents the location of I-680, the key regional highway, within San Ramon.

Arterials and Collectors

Arterials are major streets carrying the traffic of local and collector streets to and from freeways and other major streets. Collectors are streets for traffic moving between arterial and local streets, generally providing direct access to properties. Local streets provide direct access to properties and are often designed to discourage commute traffic.

Figure 3.12-1 Existing Regional Highways in General Plan Area



KEY SAN RAMON (GENERAL PLAN AREA) ARTERIALS

Alcosta Boulevard is a four-lane arterial that connects Crow Canyon Road in the northern part of San Ramon to I-680 at the southern end of San Ramon. The roadway provides access to San Ramon Regional Medical Center, City Center, Central Park, and the San Ramon Golf Club, as well as connecting to other major arterials like Crow Canyon Road, Bollinger Canyon Road, and San Ramon Valley Boulevard. Full access to I-680 is provided at the Alcosta Boulevard interchange.

Bollinger Canyon Road is a four-lane arterial connecting Crow Canyon Road in western San Ramon to the eastern area of San Ramon. The roadway connects the western and eastern residential areas with the City Center, Central Park, and Bishop Ranch. The arterial roadway varies between two and eight lanes. From Norris Canyon Road to Interstate 680, the roadway provides four lanes; between I-680 and Alcosta Boulevard, the roadway provides eight lanes; between Alcosta Boulevard and Dougherty Road, the roadway provides six lanes; and east of Dougherty Road the roadway provides four lanes. Northwest of Norris Canyon Road, Bollinger Canyon has 2 lanes and is designated a collector North of Crow Canyon Road.

Camino Tassajara is a two-lane arterial that is located east of City limits in the San Ramon sphere of influence and planning area. It connects Diablo Road to the north in Danville to Tassajara Road/Fallon Road in the south in Dublin.

Crow Canyon Road is an arterial that varies from six to eight lanes from Bollinger Canyon Road to Alcosta Boulevard. West of Bollinger Canyon Road, Crow Canyon Road has two lanes. East of Alcosta Boulevard, Crow Canyon Road has four lanes; construction is underway to widen Crow Canyon Road to six lanes between Alcosta Boulevard and St. George Way. Crow Canyon Road connects the eastern and western residential areas of San Ramon to downtown retail and dining uses, and provides full access to I-680.

Dougherty Road is a six-lane arterial that extends from Crow Canyon Road to the southern City limits, continuing through the City of Dublin and terminating at I-580. Dougherty Road serves the eastern residential area of San Ramon, and provides access to Rancho San Ramon Community Park.

East Branch Parkway is a four-lane arterial between Bollinger Canyon Road and Windemere Parkway that provides access to Windemere Ranch Middle School and San Ramon Sports Park.

Norris Canyon Road is a four-lane arterial that connects San Ramon Valley Boulevard to Alcosta Boulevard. West of San Ramon Valley Boulevard, Norris Canyon Road is a two-lane collector that provides access to Norris Canyon Estates.

Old Ranch Road is a four-lane arterial that connects Alcosta Boulevard to Dougherty Road. Old Ranch Road provides access to Old Ranch Park.

San Ramon Valley Boulevard is a four-lane arterial that runs parallel to Interstate 680 from the north City limit to the south City Limit.

Village Parkway is a four-lane arterial that connects Alcosta Boulevard to Dublin Boulevard in the City of Dublin. The roadway provides access to Dublin High School.

Windemere Parkway is a four-lane arterial that connects Bollinger Canyon Road to Camino Tassajara. Windemere Parkway provides access to Hidden Hills Elementary School and Six Pillars Park.

KEY SAN RAMON (GENERAL PLAN AREA) COLLECTORS

Collectors provide access between arterials and local roadways. They connect adjacent neighborhoods, link neighborhoods to arterial streets, and carry through-traffic in residential, industrial, and commercial areas. Primary collectors in San Ramon include:

- Albion Road
- Ashbourne Drive/Circle
- Bishop Drive
- Bollinger Canyon Road north of Crow Canyon Road
- Broadmoor Drive
- Camino Ramon
- Davona Drive
- Deerwood Drive
- Deerwood Road/ Fostoria Way
- Faria Preserve Parkway
- Harcourt Way
- Hooper Drive
- Ivy Hill Way
- Ivy Leaf Springs Road
- Japonica Way
- Kimball Avenue
- N Gale Ridge Road/S Gale Ridge Road
- N Monarch Road/S Monarch Road
- Main Branch Road
- Montevideo Drive
- Morgan Drive
- Norris Canyon Road west of San Ramon Valley Boulevard
- Omega Road
- Pine Valley Road
- N Wedgewood Road/S Wedgewood Road
- Sherwood Way
- Stagecoach Road
- Stoneleaf Road
- Twin Creeks Drive
- Westside Drive

Truck Routes

GENERAL PLAN AREA

The City of San Ramon is authorized to restrict commercial vehicles to operate on only a portion of the public roadway system, and to set weight limits or size restrictions. Exceptions include highways such as I-680. Generally, most trucks use arterial roadways to reach commercial areas or industrial areas within San Ramon. The layout of the roadway network generally discourages freight cut-through traffic within the City, and thus most truck trips within the City are for deliveries or pick-ups.

Emergency Vehicle Routes

CONTRA COSTA COUNTY

The Contra Costa County Office of the Sheriff, Emergency Services Division and Contra Costa County Office of Emergency Services (OES) coordinates countywide preparedness, response and protection services and activities for large scale incidents and disasters. Within Contra Costa County, the main routes into and out of the County that would most likely be used as evacuation routes are I-680, I-80, SR 24, SR 4, San Pablo Dam Road, Vasco Road, San Pablo Avenue, and Richmond Parkway.

GENERAL PLAN AREA

The San Ramon Office of Emergency Management (under the scope of the City's police department) maintains an Emergency Operations Plan (EOP) and is responsible for planning, outreach, and

training or disaster management and emergency preparedness for the City. The main route into and out of San Ramon that would most likely be used as an evacuation route is I-680. Arterials listed above, such as Bollinger Canyon Road, Camino Tassajara, Crow Canyon Road, and Dougherty Road, may also be utilized.

Pedestrian and Bicycle Facilities

This section describes the existing pedestrian and bicycle network in the 2040 General Plan area.

Pedestrian Facilities in General Plan Area

The City's pedestrian facilities consist of sidewalks, crosswalks, pedestrian signals, curb ramps, and pedestrian-scale street lighting, as well as the Iron Horse Regional Trail that runs north-south through the City and several other shorter off-road pathways.

San Ramon contains a "walking district" (as discussed under *San Ramon Walking District Plan* in Section 3.12.2, *Regulatory Setting)* between Crow Canyon Road, Alcosta Boulevard, I-680, and Chevron Campus south of Bollinger Canyon Road. The walking district includes Iron Horse Trail, Bishop Ranch lakes, Central Park, City Center, Crow Canyon Commons, Transit Center, schools, and San Ramon Library.

A majority of streets in San Ramon's Walking District have a standard five- to six-foot sidewalk running adjacent to the street. Some sidewalks along Bollinger Canyon Road lack the opportunity for shade and offer little buffer between pedestrians and vehicular traffic, which may deter people from walking. There are some wider walkways that exist within Central Park, around the City Center, and around Lake Cecilia and Lake Annabel. The Iron Horse Trail is a regional paved shared-use path that accommodates walkers, runners, and bicyclists traveling through the Walking District and connects to east-west walkways in the city core. As discussed under Section 3.12.2, *Regulatory Setting*, the City is planning various improvements to pedestrian facilities.

Bicycle Facilities in General Plan Area

Four categories of bikeways are specified in the Caltrans Highway Design Manual and Sections 885.1 et seq. of the California Streets and Highways Code[1]. These categories are:

- **Class I Bikeway (Bike Path):** Bike paths provide a completely separate right-of-way and are designated for the exclusive use of people riding bicycles and walking with minimal cross-flow traffic.
- **Class II Bikeway (Bike Lane):** Bike lanes provide designated street space for bicyclists, typically adjacent to the outer vehicle travel lanes. Bike lanes include special lane markings, pavement legends, and signage. Bike lanes may be enhanced with painted buffers between vehicle lanes and/or parking, and green paint at conflict zones (such as driveways or intersections).
- **Class III Bikeway (Bike Route):** Bike routes provide enhanced mixed-traffic conditions for bicyclists through signage, striping, and/or traffic calming treatments, and provide continuity to a bikeway network. Bike routes are typically designated along gaps between bike trails or bike lanes, or along low-volume, low-speed streets. Bicycle boulevards provide further enhancements to bike routes by encouraging slow speeds and discouraging non-local vehicle

[1] California Department of Transportation (Caltrans) 2020. Highway Design Manual. Seventh Edition. December 31, 2020. https://dot.ca.gov/-/media/dot-media/programs/design/documents/hdm-complete-12312020a11y.pdf (accessed June 2023).

traffic, often using traffic calming measures. Bicycle boulevards can also feature special wayfinding signage to nearby destinations or other bikeways.

- **Class IV Bikeway (Separated Bikeway)**: Separated Bikeways, also referred to as cycle tracks or protected bikeways, are bikeways for the exclusive use of bicycles which are physically separated from vehicle traffic. Separations may include grade separation, flexible posts, physical barriers, or on-street parking.

Existing bicycle facilities are presented on Figure 3.12-2, based on the City's Bicycle Master Plan (see Section 3.12.3, *Regulatory Setting)*. The San Ramon Bicycle Master Plan identifies the following major bikeways in San Ramon.

CLASS I MULTI-USE PATHS

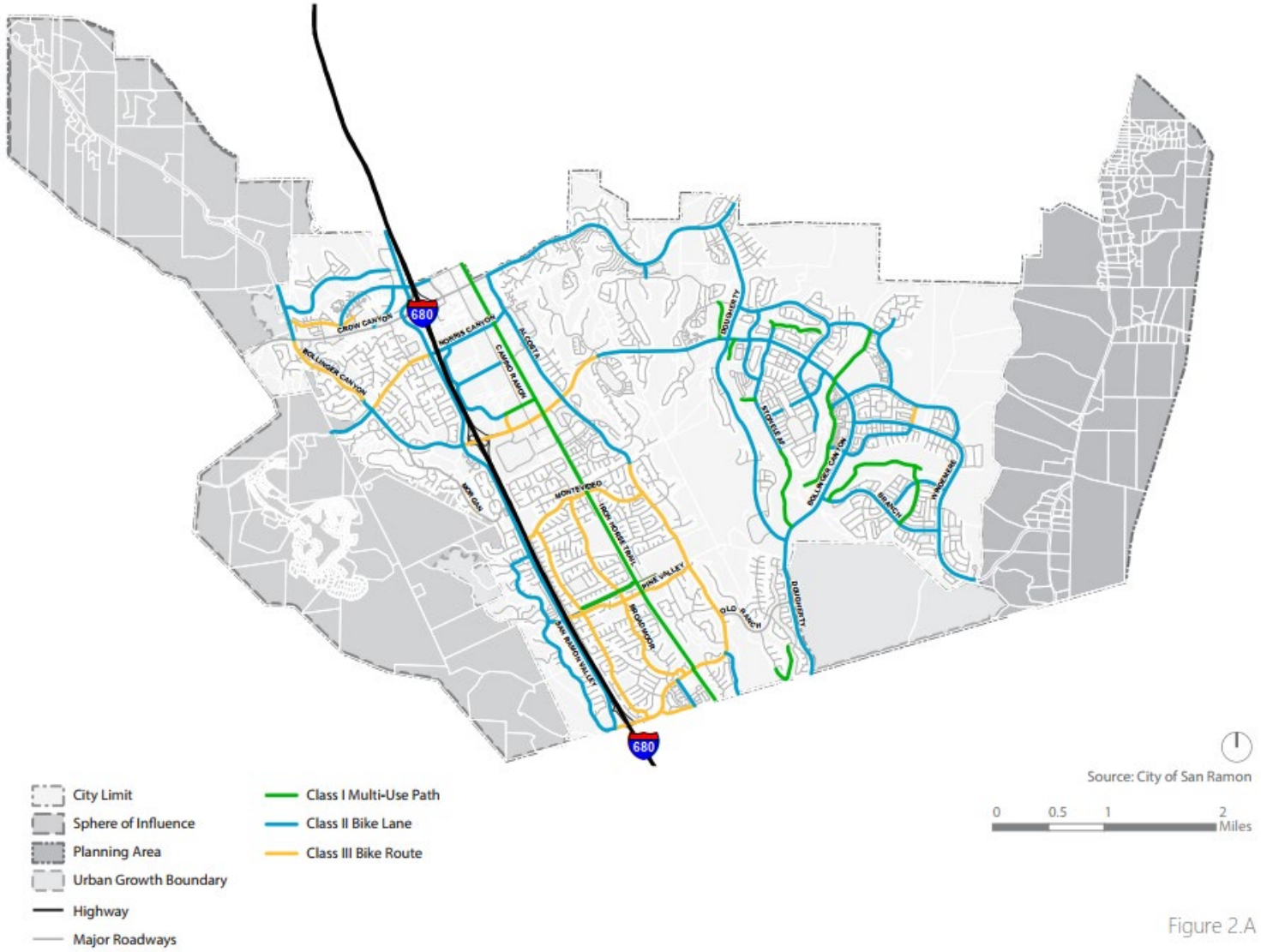
- **Iron Horse Trail:** northern City limits to southern City limits. The trail connects to Danville in the north and Pleasanton in the South. The Iron Horse Trail is the "backbone of the city's bicycle system" and links to the Bishop Ranch commercial and office center, the City Center, San Ramon City Hall, San Ramon Transit Center, the San Ramon Community Center, and numerous schools, parks, and neighborhoods.
- **Cross Valley Trail:** Tareyton Avenue to Del Mar Drive
- **West Alamo Creek Trail:** Watermill Road to Japonica Way
- **Old Dougherty Road Trail**: Stoneleaf Road to Dougherty Road
- **Bishop Drive Trail**: Iron Horse Trail to Sunset Drive

CLASS II BICYCLE LANES

The following roadways are examples of roadways that have Class II bicycle lanes, some of which are buffered bike lanes:

- San Ramon Valley Boulevard: North city limit to Alcosta Boulevard
- Bollinger Canyon Road: Canyon Lakes Drive to Dougherty Road (S)
- Dougherty Road: Crow Canyon Road to Bollinger Canyon Road (S)
- Westside Drive: San Ramon Valley Boulevard to Alcosta Boulevard
- Windemere Parkway: Roackhampton Rd to Camino Tassajara
- Alcosta Boulevard: Crow Canyon Road to Vera Cruz Drive
- Bollinger Canyon Road: San Ramon Valley Boulevard to Ascension Drive
- Japonica Way
- Albion Road
- Harcourt Way
- E Branch Parkway
- Main Branch Road
- Monarch Road
- Wedgewood Drive
- Crow Canyon Road
- Old Crow Canyon Road
- Deerwood Road
- Faria Preserve Parkway
- Norris Canyon Road
- Stoneleaf Road
- Village Parkway
- Bishop Drive
- Executive Parkway: Bishop Drive to Camino Ramon

Figure 3.12-2 Existing Major Bicycle Facilities in General Plan Area



San Ramon has added Class II buffered bike lanes along Bollinger Canyon Road between Windemere Parkway and Canyon Lakes Drive in both directions. They have also been added along Dougherty Road from near Oak Valley Drive to Crow Canyon Road in both directions.

CLASS III BICYCLE ROUTES

The following roadways are examples of roadways that have Class III bicycle route classifications:

- Bollinger Canyon Road: Crow Canyon Road to Ascension Drive
- Montevideo Drive: San Ramon Valley Boulevard to Alcosta Boulevard
- Broadmoor Drive: Alcosta Boulevard to Montevideo Drive
- Norris Canyon Road: Bollinger Canyon Road to San Ramon Valley Boulevard
- Bollinger Canyon Road: Crow Canyon Road to Ascension Drive
- Bollinger Canyon Road: San Ramon Valley Boulevard to Canyon Lakes
- Executive Parkway: Camino Ramon to Iron Horse Trail
- Pine Valley Road: San Ramon Valley Boulevard to Alcosta Boulevard

Transit Service

Transit agencies serving San Ramon and the surrounding region include Bay Area Rapid Transit (BART), which has stations in Walnut Creek and Dublin, and Contra Costa Transit Agency (County Connection), which provides bus service in the area. The San Ramon Transit Center on Camino Ramon and Executive Parkway provides a bus stop for multiple bus routes and parking for intermodal travelers to increase the accessibility of transit.

Bay Area Rapid Transit

SAN FRANCISCO BAY AREA REGION

BART currently operates over 130 miles of double-track, rapid rail service, serving 50 stations and over three million people in five densely populated Bay Area Counties: Contra Costa, Alameda, San Francisco, Santa Clara, and San Mateo[2]. As of 2022, BART carries more than 400,000 riders per weekday.[3]The Dublin BART Station is located approximately two miles south of the San Ramon General Plan area, while the Walnut Creek BART Station is located approximately nine miles north.

GENERAL PLAN AREA

There are no BART stations within the San Ramon City limits or San Ramon Planning Area.

County Connection

CONTRA COSTA COUNTY

County Connection currently provides fixed route and paratransit bus service throughout the communities of San Ramon, Concord, Martinez, Walnut Creek, Clayton, Lafayette, Orinda, Moraga, Danville, as well as unincorporated communities in central Contra Costa County. County Connection operates a fleet of 125 fully accessible transit buses and 63 paratransit vehicles. Service is provided

[2] BART. 2022a. BART Facts 2022. https://www.bart.gov/sites/default/files/docs/BARTFacts2022.pdf (accessed April 2023).
[3] BART, 2022b. Ridership Watch. https://www.bart.gov/news/articles/2020/news20200225#charts (accessed April 2023).

from approximately 6:00 a.m. to 9:00 p.m. on weekdays, and from approximately 9:00 a.m. to 7:00 p.m. on weekends.[4]

GENERAL PLAN AREA

County Connection provides local routes, express routes, and weekend routes, as described below and shown in Figure 3.12-3.

Local Routes

- **Route 21 – BART Walnut Creek/San Ramon** Route 21 operates between Walnut Creek BART Station and San Ramon Transit Center via Danville Boulevard, Camino Ramon, and San Ramon Valley Boulevard. Weekday service runs between 5:30 AM and 9:30 PM, with typical headways of 30 minutes during peak periods (5:30-10:30 AM and 1:30-8:30 PM) and 60 minutes in off-peak periods.
- **Route 35 – Dublin BART/San Ramon** Route 35 operates between Dublin/Pleasanton BART Station and San Ramon Transit Center via Dougherty Road, Bollinger Canyon Road, Windemere Parkway, Crow Canyon Road, and Bishop Drive. Weekday service runs between 6:00 AM and 8:00 PM, with typical headways of 30 minutes during peak periods (6:00-11:00 AM and 2:00-8:00 PM) and 60 minutes in off-peak periods.

Express Routes

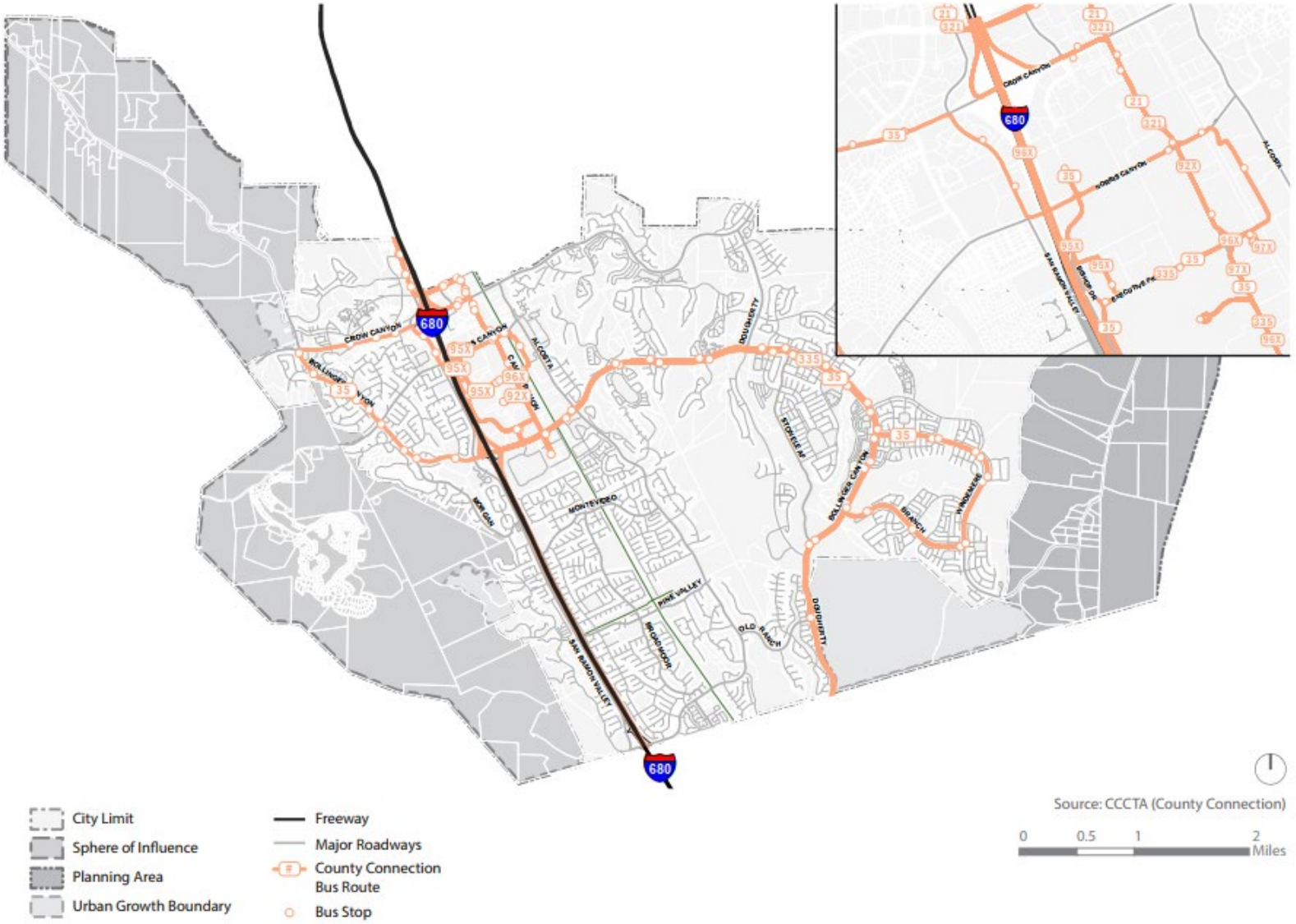
- **Route 92X – Pleasanton ACE/Mitchell Drive** Route 92X operates between Pleasanton Ace Train Station and Mitchell Drive Park and Ride Lot in Walnut Creek via Bernal Avenue, Interstate 680, Camino Ramon, and Ygnacio Valley Road. Weekday service runs once from 5:30-7:30 AM and three times from 3:30-7:45 PM.
- **Route 95X – San Ramon/BART Walnut Creek** Route 95X operates between San Ramon Transit Center and Walnut Creek BART Station via Executive Parkway, Norris Canyon Road, and Interstate 680. Weekday service runs from 6:30-8:45 AM and 3:15-7:15 PM every 30 minutes.
- **Route 96X – BART Walnut Creek/Bishop Ranch** Route 96 X operates between Walnut Creek BART Station and Bishop Ranch in San Ramon via Interstate 680 and Camino Ramon. Weekday service runs from 6:15-9:30 AM and 3:00-7:15 PM every 30 minutes.
- **Route 97X – BART Dublin/Bishop Ranch** Route 97X operates between Dublin/Pleasanton BART Station and Bishop Ranch in San Ramon via Interstate 580, Interstate 680, and Camino Ramon. Weekday service runs from 6:30-9:00 AM and 4:00-6:15 PM every 60 minutes.

Weekend Routes

- **Route 321 – BART Walnut Creek/San Ramon** Route 321 operates between Walnut Creek BART Station and San Ramon Transit Center via Danville Boulevard, Camino Ramon, and San Ramon Valley Boulevard. Weekend service runs between 7:15 AM and 9:30 PM every 60 minutes.
- **Route 335 – BART Dublin/San Ramon** Route 335 operates between Dublin/Pleasanton BART Station and San Ramon Transit Center via Dougherty Road, Bollinger Canyon Road, and Bishop Drive. Weekend service runs between 7:30 AM and 7:00 PM every 60 minutes.

[4] County Connection. 2023. About Us. https://countyconnection.com/about/ (accessed April 2023).

Figure 3.12-3 Existing Transit Lines and Stops in General Plan Area



County Connection also offers a rideshare support program named Go San Ramon. Starting in May 2022, County Connection pays half the fare (up to $5) on rideshare trips on Uber and Lyft within a certain service area. This program was introduced in response to the elimination of bus route 36 that previously served the central Contra Costa County service area.

Aviation Facilities

The City of San Ramon is served by San Francisco Internal Airport (SFO) and Oakland International Airport (OAK). SFO enplaned and deplaned over 16 million passengers in 2020 and facilitated takeoffs of air carriers, regional jets, general aviation propeller aircraft, commuter propeller aircraft, business jets, fixed-wing military aircraft, and both civilian and military helicopters.[5] SFO is located approximately 23 miles southwest of the General Plan area. OAK served approximately 13.4 million passengers in 2019, and serves major all-cargo carriers such as FedEx and UPS.[6] OAK is located approximately 12 miles west of the General Plan area.

3.12.3 Regulatory Framework

Federal Regulations

Americans with Disabilities Act of 1990

The Americans with Disabilities Act (ADA) of 1990 provides comprehensive rights and protections to individuals with disabilities. The goal of the ADA is to assure equality of opportunity, full participation, independent living, and economic self-sufficiency for people with disabilities. To implement this goal, the United States Access Board, an independent Federal agency created in 1973 to ensure accessibility for people with disabilities, has created accessibility guidelines for public rights-of-way. While these guidelines have not been formally adopted, they have been widely followed by jurisdictions and agencies nationwide in the last decade. The guidelines, last revised in July 2011, address various issues, including roadway design practices, slope and terrain issues, pedestrian access to streets, sidewalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way.

Federal Highway Administration

The FHWA is the agency of the United States Department of Transportation responsible for the federally funded roadway system, including the interstate highway network and portions of the primary State highway network. FHWA funding is provided through the Fixing America's Surface Transportation Act. Federal funds can be used to fund eligible local transportation improvements in such as projects to improve the efficiency of existing roadways, traffic signal coordination, bikeways, pedestrian facilities, and transit system upgrades.

[5] SFO. 2020. SFO Fact Sheet Calendar Year 2020. https://www.flysfo.com/sfo-fact-sheet (accessed April 2023).
[6] Oakland International Airport. 2021. Terminal Modernization and Development Project EIR. https://www.oaklandairport.com/wp-content/uploads/2021.05.25-Fact-Sheet-FINAL.pdf (accessed April 2023).

State Regulations

Senate Bill 743

On September 27, 2013, Governor Jerry Brown signed Senate Bill (SB) 743 into law. SB 743 changed the way transportation impact analysis is conducted as part of CEQA compliance. These changes eliminated automobile delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts under CEQA.

Prior rules treated automobile delay and congestion as an environmental impact. SB 743 requires the *CEQA Guidelines* to prescribe an analysis that better accounts for transit and reductions of greenhouse gas emissions. In December 2018, Office of Planning and Research (OPR) released the final update to *CEQA Guidelines* consistent with SB 743, which recommends using vehicle miles traveled (VMT) as the most appropriate metric of transportation impact to align local environmental review under CEQA with California's long-term greenhouse gas emissions reduction goals. The *Guidelines* require all jurisdictions in California to use VMT-based thresholds of significance no later than July 1, 2020.

At the same time as the release of the updated *CEQA Guidelines,* OPR also released a non-binding *Technical Advisory on Evaluating Transportation Impacts in CEQA*, which outlines potential VMT analysis methodologies and thresholds of significance for use by agencies in California based on substantial evidence developed by OPR related to achievement of the State's greenhouse gas emissions reductions targets.[7]

Senate Bill 32 and Senate Bill 375

On September 8, 2016, the governor signed SB 32 into law, extending the California Global Warming Solutions Act of 2006 by requiring the state to further reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation.

The Sustainable Communities and Climate Protection Act of 2008 (SB 375), signed in August 2008, enhances the state's ability to reach greenhouse gas emissions goals by directing the California Air Resources Board to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. SB 375 aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations.

Assembly Bill 747 and Senate Bill 99

Assembly Bill (AB) 747 (2019) requires that the safety element be reviewed and updated to identify vehicle evacuation routes and their capacity, safety, and viability under a range of emergency scenarios. This will be a requirement for all safety elements or updates to hazard mitigation plans completed after January of 2022.

SB 99 (2019) requires review and update of the safety element to include information to identify residential developments in hazard areas that do not have at least two vehicle emergency evacuation routes. In essence, this legislation assists in identifying neighborhoods and households

[7] OPR. 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf (accessed April 2023).

within a hazard area that have limited vehicle accessibility. This is intended to assist the City with identifying opportunities to improve connectivity and evacuation capacity (generally).

Assembly Bill 43

AB 43, also known as Traffic Safety, allows local government agencies to reduce vehicle speeds to accommodate vulnerable users such as pedestrians, bicyclists, seniors, and wheelchair users and create safety corridors to improve traffic safety. AB 43 takes effect in July 2024.

The City of San Ramon can evaluate changes to its speed limit practices as AB 43 takes effect.

California Department of Transportation Planning Documents

Caltrans is responsible for planning, designing, constructing, operating, and maintaining the State highway system. Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the highway system, including ramps and access points, within the study area would need to be approved by Caltrans. The following Caltrans planning documents emphasize the State of California's focus on transportation infrastructure that supports mobility choice through multimodal options, smart growth, and efficient development.

- Smart Mobility 2010: A Call to Action for the New Decade (Smart Mobility Framework)
- Complete Streets Implementation Action Plan
- Strategic Plan 2020-2024
- California Transportation Plan 2050

SMART MOBILITY FRAMEWORK

The purpose of the Smart Mobility Framework, published in February 2010, is to address the State mandate to find solutions to climate change, reduce per capita VMT, and create a safe and equitable transportation system.[8] The Smart Mobility Framework includes 10 implementing themes to achieve its purpose, including integration into Caltrans and other transportation agencies' policy and practice, collection of data and tools to implement the Smart Mobility Framework, undertaking of major cross-functional initiatives, and integration into local government land use and transportation planning.

COMPLETE STREETS IMPLEMENTATION ACTION PLAN

On September 30, 2008, the California Complete Streets Act of 2008 was signed into law. As of January 2011, AB 1358 requires any substantive revision of the circulation/mobility element of a city or county's general plan to identify how they will safely accommodate the circulation of all users of the roadway including pedestrians, bicyclists, children, seniors, individuals with disabilities, and transit riders, as well as motorists.

The City of San Ramon has established Complete Streets Guidelines that inform the implementation of policies.

[8] Caltrans. 2010. Smart Mobility 2010. February 2010. https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/office-of-smart-mobility-and-climate-change/smf-handbook-062210-a-a11y.pdf (accessed April 2023).

CALTRANS DEPUTY DIRECTIVE 64-R1: COMPLETE STREETS – INTEGRATING THE TRANSPORTATION SYSTEM

In 2001, Caltrans adopted Deputy Directive 64; a policy directive related to non-motorized travel throughout the State. In October 2008, Deputy Directive 64 was strengthened to reflect changing priorities and challenges. Deputy Directive 64-R1 states:

> The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system. Providing safe mobility for all users, including motorists, bicyclists, pedestrians and transit riders, contributes to the Department's mission/vision: "Improving Mobility across California."

Successful long-term implementation of this directive is intended to result in more options for people to go from one place to another, less traffic congestion and greenhouse gas emissions, more walkable communities (with healthier, more active people), and fewer barriers for older adults, children, and people with disabilities.

DIRECTOR'S POLICY 22: DIRECTOR'S POLICY ON CONTEXT SENSITIVE SOLUTIONS

Director's Policy 22, a policy regarding the use of "Context Sensitive Solutions" on all State highways, was adopted by Caltrans in November of 2001. The policy reads:

> The Department uses "Context Sensitive Solutions" as an approach to plan, design, construct, maintain, and operate its transportation system. These solutions use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Context sensitive solutions are reached through a collaborative, interdisciplinary approach involving all stakeholders.

The context of all projects and activities is a key factor in reaching decisions. It is considered for all State transportation and support facilities when defining, developing, and evaluating options. When considering the context, issues such as funding feasibility, maintenance feasibility, traffic demand, impact on alternate routes, impact on safety, and relevant laws, rules, and regulations must be addressed.

The policy recognizes that "in towns and cities across California, the State highway may be the only through street or may function as a local street," that "these communities desire that their main street be an economic, social, and cultural asset as well as provide for the safe and efficient movement of people and goods," and that "communities want transportation projects to provide opportunities for enhanced non-motorized travel and visual quality." The policy acknowledges that addressing these needs will assure that transportation solutions meet more than just traffic and operational objectives.

STRATEGIC PLAN 2020-2024

Caltrans' 2020-2024 Strategic Plan weaved sustainability principles through all of its goals. Goals of the Strategic Plan are related to safety, enhancing and connecting the multimodal transportation network, lead climate action, and advancing equity in all communities.[9]

[9] Caltrans. 2021. Caltrans 2020-2024 Strategic Plan. https://dot.ca.gov/-/media/dot-media/programs/risk-strategic-management/documents/sp-2020-16p-web-a11y.pdf (accessed April 2023).

CALIFORNIA TRANSPORTATION PLAN 2050

Caltrans completed the California Transportation Plan to comply with Title 23, Code of Federal Regulation Section 450.214 and pursuant to California Government Code Title 7 Division 1 Chapter 2.3. The California Transportation Plan provides a roadmap for making effective, equitable, transparent, and transformational transportation decisions in California. The vision of the California Transportation Plan is: "California's safe, resilient, and universally accessible transportation system supports vibrant communities, advances racial and economic justice, and improves public and environmental health," which is supported by goals related to safety, climate, equity, accessibility, public health, economy, environment, and infrastructure.[10]

California Encroachment Permits

Any work within the existing right of way would have to comply with Caltrans permitting requirements. This includes a traffic control plan that adheres to the standards set forth in the California Manual of Uniform Traffic Control Devices (MUTCD). As part of these requirements, there are provisions for coordination with local emergency services, training for flagmen for emergency vehicles traveling through the work zone, temporary lane separators that have sloping sides to facilitate crossover by emergency vehicles, and vehicle storage and staging areas for emergency vehicles. MUTCD requirements also provide for construction work during off-peak hours and flaggers.

Regional and Local Regulations

Plan Bay Area 2050

MTC is responsible for regional transportation planning in the nine-county San Francisco Bay Area. MTC most recently updated its Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), a federally-mandated 20-year blueprint for the region, in 2021. This RTP/SCS is known as Plan Bay Area 2050. RTPs must be developed in cooperation with State and local stakeholders and provide a clear vision of the regional transportation goals, policies, objectives, and strategies. This vision must be realistic and within fiscal constraints. Responsibility for approving and overseeing improvements to the State highway system rests with Caltrans, while each local jurisdiction (cities and County) is responsible for planning and implementing improvements to the streets within its boundaries.

The RTP/SCS sets forth the following transportation-related goals under the umbrella of Transportation Strategies. Other goals have been established for Housing Strategies, Economic Strategies, and Environmental Strategies. Each Transportation Strategies goal (listed below) has associated supportive strategies to help guide implementation, and performance indicators by which the region can assess its progress.

Goal Maintain and Optimize the Existing System

- T1. Restore, operate and maintain the existing system
- T2. Support community-led transportation enhancements in Equity Priority Communities
- T3. Enable a seamless mobility experience
- T4. Reform regional transit fare policy

[10] Caltrans. 2021. California Transportation Plan 2050. February 2021. https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/ctp-2050-v3-a11y.pdf (accessed April 2023).

- T5. Implement per-mile tolling on congested freeways with transit alternatives
- T6. Improve interchanges and address key highway bottlenecks
- T7. Advance other regional programs and local priorities

Goal Create Healthy and Safe Streets

- T8. Build a Complete Streets network
- T9. Advance regional Vision Zero policy through street design and reduced speeds

Goal Build a Next-Generation Transit Network

- T10. Enhance local transit frequency, capacity and reliability
- T11. Expand and modernize the regional rail network
- T12. Build an integrated regional express lanes and express bus network

Contra Costa County Transportation Authority Congestion Management Program

The Contra Costa Transportation Authority (CCTA) is Contra Costa County's designated Congestion Management Agency (CMA). It is responsible for implementing programs to ensure traffic levels remain manageable. San Ramon serves on the Transportation Partnership and Cooperation (TRANSPAC) that includes Contra Costa County and the cities of Clayton, Concord, Martinez, San Ramon, and Walnut Creek.

As the CMA, CCTA is in charge of coordinating land use, air quality, and transportation planning among local jurisdictions. A Congestion Management Program (CMP) was created to spend the funds allocated to these projects, known as Measure J. This measure is a one-half cent Countywide sales tax used for transportation improvements within the County. The revenue must be spent on projects and programs included in the CCTA Transportation Expenditure Plan. The Expenditure Plan designates 18 percent of the annual sales tax revenue as "return-to-source" funds. The City's eligibility for these funds is contingent on compliance with the City's Growth Management Program.

Contra Costa Countywide Transportation Plan

As a member of CCTA, the City of San Ramon is active in the development of the Countywide Transportation Plan (CTP), intended to carry out the following Countywide transportation goals and policies relevant to the 2040 General Plan:

Goal 1 Support the efficient, safe, and reliable movement of people and goods using all available travel modes.

Policy 1.1 **Efficiency.** Increase the efficiency of highways and arterial roads through capital investments, operational enhancements, and use of technology.

Policy 1.2 **Partnerships.** Engage in partnerships with jurisdictions, stakeholders, and other agencies to identify and implement strategies for managing congestion and increasing multi-modal mobility.

Policy 1.4 **Street and Roadway Improvements.** Improve the highway and arterial system to influence the location and nature of anticipated growth in accordance with the General Plans of local jurisdictions and consistent with Contra Costa Transportation Authority adopted Countywide Transportation Plan.

Goal 2 Manage growth to sustain Contra Costa's economy, preserve its environment and support its communities.

Policy 2.1 **Cooperative Planning.** Continue to require cooperative transportation and land use planning among Contra Costa County, cities, towns, and transportation agencies.

Goal 3 Expand safe, convenient, and affordable alternatives to the single-occupant vehicle.

Policy 3.1 **Transit Service Expansion.** Help fund the expansion of existing transit services and regional express lanes, and maintenance of existing operations, including BART, bus transit, school buses, and paratransit.

Policy 3.2 **Transit Service Coordination.** Link transit investments to increased coordination and integration of public transit services, and improved connections between travel modes.

Policy 3.3 **Complete Streets.** Require local jurisdictions to incorporate policies and standards for "complete streets" that support transit, bicycle and pedestrian access in new developments, infill development areas ("Priority Development Areas"), and transit priority areas.

Policy 3.5 **Alternate Modes.** Promote the formation of more carpools and vanpools, and greater use of transit, bicycling, and walking.

Goal 4 Maintain the transportation system.

Policy 4.1 **Stable Funding Sources.** Advocate for stable sources of funds for transit operations and other programs that support the transportation system.

Policy 4.2 **Maintenance.** Require and fund programs for effective preventive maintenance and rehabilitation of the transportation system ("deferred maintenance").

Policy 4.3 **Long-Term Needs.** Secure funding that will maintain the long-term health of all components of the transportation system.

The CTP incorporates five sub-regional Action Plans for Routes of Regional Significance (Action Plans). This is one of the primary vehicles for implementing achieving the Measure J Growth Management Program's goal of reducing the cumulative impacts of growth. The Action Plans also fulfill a key requirement of CCTA's Congestion Management Program. This is a State-mandated program for evaluating the impact of land use decisions on the regional transportation system and establishing performance measures. Each Action Plan contains these components:

- Long range assumptions about future land uses based on local general plans and travel demand based on household and job growth.
- Multi-modal transportation objectives that can be measured and timed.
- Specific actions to be implemented by each jurisdiction.
- A process for consultation on environmental documents.
- A procedure for reviewing the impacts of local General Plan amendments that could affect the transportation objectives.
- A schedule for reviewing and updating the Action Plans.

The City of San Ramon is included in the Tri-Valley Action Plan. The Tri-Valley Action Plan includes both regional actions and actions for specific routes. As defined by the Tri-Valley Action Plan, Routes of Regional Significance are freeways and major arterials that connect two or more subareas, cross county boundaries, carry a significant amount of through traffic, or provide access to a regional highway or transit facility. They are broken up into two categories: interregional and intraregional. Interregional routes provide linkages between the Tri-Valley and other sub-areas. Intraregional routes connect communities within the Tri-Valley.

The routes or regional significance are listed below. Note that routes both within and outside of San Ramon are listed, as the network has a regional service area.

INTERREGIONAL ROUTES OF REGIONAL SIGNIFICANCE

- I-580
- I-680
- State Route 84
- Vasco Road
- Crow Canyon Road

INTRAREGIONAL ROUTES OF REGIONAL SIGNIFICANCE

- Alcosta Boulevard
- Bernal Avenue
- Bollinger Canyon Road
- Camino Tassajara
- Danville Boulevard
- Dougherty Road
- Dublin Boulevard
- Fallon Road
- First Street/Railroad Avenue
- Hopyard Road
- Iron Horse Trail
- Jack London Boulevard
- San Ramon Road
- San Ramon Valley Boulevard
- Santa Rita Road
- Stanley Boulevard
- Stoneridge Drive
- Sunol Boulevard
- Sycamore Valley Road
- Tassajara Road
- Vasco Road

CCTA began updating the subregional Action Plans and the Countywide Transportation Plan in 2021. These updates will bring the plans into compliance with recent State transportation legislation such as SB 743 and will outline countywide efforts to increase public and active transportation mode share. In accordance with emerging transportation best management practices, these plans will expand beyond typical transportation evaluation topics and will consider safety, equity, climate change, and technology throughout. These plans will include Regional Transportation Objectives (RTOs) that set quantifiable metrics by which CCTA and its jurisdictions can measure the success of actions. Specific actions, including both projects and programs, will be adopted to support the achievement of each RTO, and will be intended to result in a reduction of countywide VMT and GHG emissions.

CCTA VMT Guidance for Member Agencies

The CCTA has developed guidance for member jurisdictions to use in developing their own VMT analysis methods, metrics, and thresholds of significance. The CCTA's *Growth Management Program Implementation Guide* (Revised February 17, 2021) and CCTA's Technical Procedures, Appendix F (CCTA Recommended Methodology) describes the recommendations. A flow chart describing the recommended methodology is included in the Technical Appendix (Appendix 1) to Appendix E. At the time of publishing, the City of San Ramon has chosen to follow the CCTA guidance. More detail on the VMT analysis methodology, metrics, and thresholds of significance are provided in Section 3.12.4, *Impacts and Mitigation Measures*.

San Ramon General Plan

The current San Ramon General Plan contains policies related to transportation and circulation, but they would be replaced by the proposed 2040 General Plan.

San Ramon Bicycle Master Plan

The San Ramon City Council adopted the San Ramon Bicycle Master Plan in April 2018. The purpose of the Bicycle Master Plan is to develop strategies to improve safety and access and to encourage bicycling throughout the city. It outlines goals, policies, physical improvements, educational programs, and funding/implementation strategies. The Bicycle Master Plan contains goals regarding connectivity, safety, mode share, equity, community, and land use integration.[11]

San Ramon Walking District Plan

On February 8, 2022, the City Council adopted the San Ramon Walking District Plan Guidelines[12]. The San Ramon Walking District Plan proposes improving the walking district's pedestrian facilities by creating walking paths and walking corridors, widening sidewalks, and adding landscape buffers between vehicular traffic on major streets including Bishop Drive, Camino Ramon, Executive Parkway, and Norris Canyon Road. Other proposed amenities to encourage walking include walking loops that link major destinations, new parks and parkways, Iron Horse Trail Overcrossings, added seating, drinking fountains, public art, and wayfinding signage.

San Ramon Intelligent Transportation (ITS) Master Plan

The Intelligent Transportation Systems (ITS) Master Plan was adopted in 2018 and serves as the City's tool to define essential ITS deployment recommendations needed to take full advantage of the City's communication and traffic signal system and to achieve the City's Smart City goals. With the rapid changes in transportation technologies, technology-driven data collection, introduction of connected vehicles, and rapidly developing autonomous vehicles, there was a need to have a plan in place for system communication and integration. The ITS Master Plan was launched to evaluate the City's information, communication and technology systems, and to determine future needs and costs of implementation.

[11] San Ramon, City of. 2018. San Ramon Bicycle Master Plan. April 2018. https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_10826046/File/Shared%20Documents/Transportation%20Documents/Fianl%20BMP.pdf (accessed June 2023).

[12] San Ramon, City of. 2022. San Ramon Walking District Plan. January 2022. https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_10826046/File/Our%20City/Departments/Parks%20&%20Comm%20Srvs/Walking%20District/Walking%20District%20Master%20Plan%20including%20Errata.pdf (accessed June 2023).

3.12.4 Impacts and Mitigation Measures

Significance Criteria

The City of San Ramon utilizes the following 2022 *CEQA Guidelines* Appendix G significance criteria questions related to Transportation.

Would the 2040 General Plan:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
b) Conflict or be inconsistent *CEQA Guidelines* Section 15064.3, subdivision (b)?
c) Substantially increase traffic-related 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?

Approach to Analysis

VMT Impact Methodology and Assumptions

Since SB 743 eliminated the use of level of service (LOS) for CEQA impact analysis purposes, that method is not utilized in this analysis. The analysis in this document examines potential roadway transportation impacts under current CEQA criteria. The primary quantitative measure of roadway impacts is VMT. The VMT analysis methodology utilizes the procedures described in the CCTA's *Growth Management Program Implementation Guide* (revised February 17, 2021), Appendix F. The procedures are summarized below.

PROJECT-LEVEL VMT SCREENING

There are five screening criteria that can be applied to screen projects out of needing to conduct a project-level VMT analysis.

1. **CEQA Exemption.** Any project that is exempt from CEQA is not required to conduct a VMT analysis.
2. **Small Projects.** Small projects can be presumed to cause a less-than-significant VMT impact. Small projects are defined as having 10,000 square feet or less of non-residential space or 20 residential units or less, or otherwise generating less than 836 VMT per day.
3. **Local-Serving Uses.** Projects that consist of Local-Serving Uses can generally be presumed to have a less-than-significant impact absent substantial evidence to the contrary, since these types of projects will primarily draw users and customers from a relatively small geographic area that will lead to short-distance trips and trips that are linked to other destinations.
4. **Projects Located in Transit Priority Areas (TPAs).** Projects located within a TPA can be presumed to have a less-than-significant impact absent substantial evidence to the contrary. This exemption would not apply if the project:
   - Has a Floor Area Ratio (FAR) of less than 0.75;
   - Includes more parking for use by residents, customers, or employees than required by the lead agency (if the agency allows but does not require the project to supply a certain amount of parking);

- Is inconsistent with the applicable Sustainable Communities Strategy (SCS) (as determined by the lead agency, with input from the Metropolitan Transportation Commission (MTC)); or
- Results in a net reduction in multi-family housing units.

5. **Projects Located in Low VMT Areas.** Residential and employment-generating projects located within a low VMT-generating area are presumed to have a less than significant impact absent substantial evidence to the contrary. A low VMT area is defined as follows:
   - For housing projects: Cities and unincorporated portions within CCTA's five subregions that have existing home-based VMT per capita that is 85% or less of the existing countywide average.
   - For employment-generating projects: Cities and unincorporated portions of CCTA's five subregions that have existing home-work VMT per worker that is 85% or less of the existing regional average.

   There is no definition of a low VMT area for regional-serving and other project types, since these projects will always require a VMT analysis. Mixed-use projects may qualify for the use of this screening criterion if they include only housing, employment-generating uses and local-serving uses, and can reasonably be expected to generate VMT per resident and/or per worker that is similar to the existing land uses in the low VMT area.

As discussed below, the 2040 General Plan does not meet these five potential screening approaches and, thus, requires a full VMT assessment.

PROJECTS REQUIRING VMT ANALYSIS: SCENARIOS AND SIGNIFICANCE TEST

A project not excluded from VMT analysis through the screening process described above is subject to a VMT analysis to determine if it has a significant VMT impact. The analysis scenarios and significance assessment are described below.

The following scenarios are addressed in the VMT analysis. Note that, while the CCTA guidance recommends that VMT impacts be evaluated against baseline (existing) conditions, for this analysis the home-based VMT per resident and home-work VMT per employee of the 2040 General Plan is evaluated under future (2040) conditions, because the 2040 General Plan is build-out of the city under the General Plan. In addition to the comparison of the 2040 General Plan's 2040 home-based VMT per resident and home-work VMT per employee to the baseline metrics, a cumulative assessment of the project's effect on total countywide VMT rates (boundary VMT) is presented.

- *Baseline (2022) Conditions:* The most current version of the baseline (2022) CCTA model is used to determine the baseline home-based VMT per resident and home-work VMT per employee for all the traffic analysis zones (TAZs) within the San Ramon Planning Area, as well as to determine the General Plan area-wide average VMT per resident and VMT per employee, and the 85 percent values of these metrics. Countywide metrics are also reported for reference.
- *2040 No Project Conditions:* The most current version of the Year 2040 CCTA model is used to determine the home-based VMT per resident and the home-work VMT per employee for all TAZs within the San Ramon Planning Area. Countywide metrics are also reported for reference.
- *2040 Plus Project Conditions:* The 2040 No Project CCTA model land uses within San Ramon are adjusted to reflect the housing units proposed in the 2040 General Plan, and the same metrics as described for the 2040 No Project case are calculated.

- *2040 Plus Project Significance Assessment:* The 2040 Plus Project home-based VMT per resident and home-work VMT per employee for the San Ramon Planning Area is compared to the baseline 2022 General Plan area-wide home-based VMT per resident and home-work VMT per employee. If the 2040 With Project values are higher than 85% of the baseline 2022 General Plan area-wide average values, the impact is significant.
- *Cumulative Analysis and Significance Assessment (Project's Effect on Total Countywide VMT):* The total Countywide VMT per service population (defined as VMT generated by all trip types divided by all residents and employees) is compared for the 2040 Plus Project condition against the 2040 No Project condition. If the Project causes total Countywide VMT per service population to increase, this would constitute a significant impact.[13]

VMT Impact Analysis Approach

MODELING PROCEDURE

The Contra Costa Countywide Travel Demand Model (CCTA Model) was used to generate VMT estimates for the plan. The CCTA Model allows analysts to forecast regional travel behavior as a function of local land use development decisions, transportation network infrastructure planning, and land use and network policies. The CCTA Model reflects data included in Plan Bay Area 2040, the RTP/SCS that was recently replaced with adoption of Plan Bay Area 2050 by the MTC and ABAG. CCTA has prepared a memorandum documenting the CCTA Model's consistency with Plan Bay Area 2040, and the model is currently the best available tool for analysis of VMT impacts.

Residential projects are evaluated based on the home-based VMT per resident VMT metric. Home-based VMT is defined as all home-based automobile vehicle trips traced back to the residence of the trip-maker. Non-home-based trips are excluded. This VMT includes the entire length of the trip. This home-based VMT is then divided by the number of residents to calculate home-based VMT per resident.

Non-residential uses are evaluated based on the home-work VMT per employee metric. Home-work VMT is defined as the employee commute trip to and from work, and excludes mid-day trips, vendor and delivery trips, and visitor trips to the work site.

The VMT calculations are done in the CCTA Model via the production and attraction trip matrices to be able to attribute automobile vehicle trips to the residence of the trip-maker or the work site of the trip maker, respectively. The calculations include the entire trip length, including the portion that leaves the travel model area (the nine-county Bay Area). VMT for trips that leave the travel model area is adjusted to account for the part of the trip that occurs outside of the travel model area.

LAND USE AND TRANSPORTATION ANALYSIS SCENARIOS

Table 3.12-1 shows the General Plan area-wide land uses under the Baseline (2022) conditions (from the CCTA model), 2040 No Project conditions (from the CCTA model) and 2040 With Project conditions with the housing growth proposed in the 2040 General Plan. A table showing the housing units at the TAZ level is included in the Technical Appendix to Appendix E. The growth includes projects that are in the planning and entitlement process; changes proposed as part of the proposed plan; and additional changes due to changes to City of San Ramon specific plans. Note that the 2040 No Project CCTA model housing units for the General Plan area were reviewed and it was confirmed

[13] Note that the cumulative analysis is only required by the CCTA Guidance if the project-level impact is found to be significant.

that the growth between 2022 and 2040 was higher than the number of units that are currently approved but not yet built. As such, the model accommodates the 2040 No Project land use growth envelope, on a General Plan area-wide basis. It is noted that the remainder of the 2040 CCTA Model represents 2040 land use growth consistent with ABAG forecasts.

Table 3.12-1 General Plan Area Land Use Summary by Scenario

Scenario	Total Housing Units	Single Family Units	Multi-Family Units
CCTA 2022 Baseline Model	28,866	22,846	6,020
Existing General Plan Buildout	34,311	26,093	8,218
General Plan Update Buildout	39,021	23,322	15,699
Growth: Existing General Plan Buildout – CCTA 2022 Baseline Model	5,445	3,247	2,198
Growth: General Plan Update Buildout – CCTA 2022 Baseline Model	10,155	476	9,679

Source: CCTA Travel Demand Model (2022 & 2040 Data); City of San Ramon (Buildout Data); June 2023.

EIR Scoping Comments Consideration

No comments relevant to CEQA were received in response to the EIR NOP specific to transportation that need to be addressed in the impacts discussion.

Specific Thresholds of Significance

The City of San Ramon has not adopted quantitative thresholds for the evaluation of VMT, transit facilities, bicycle and pedestrian facilities, design feature hazards, or emergency access. However, the City applies the following qualitative transportation thresholds:

VMT and Roadway Facilities

The 2040 General Plan was assessed for VMT to comply with SB 743 requirements and *CEQA Guidelines* section 15064.3, subdivision (b). The City of San Ramon does not have published guidelines for VMT analysis for development projects. To determine impact findings for the 2040 General Plan the analysis is estimated based on CCTA guidance.

The following thresholds of significance are used to evaluate potential VMT impacts with implementation of the 2040 General Plan:

- Residential land uses: 15 percent below the region's average VMT per capita under baseline. For the purpose of this analysis, the applicable region is Contra Costa County.
- Office/employment land uses: 15 percent below the region's average VMT per employee under baseline conditions.

Any increase in the VMT per capita or VMT per employee with the proposed plan compared to the respective threshold (15 percent below the applicable baseline) would be considered a significant impact.

Generally, a plan/project causes a significant impact to roadway facilities if an element of it conflicts with existing or planned roadways. The evaluation of roadway facilities shall consider if:

- A plan or project or related mitigation disrupts existing roadway facilities;
- A plan or project or related mitigation conflicts with an existing roadway facility; or
- A plan or project or related mitigation conflicts with roadway policies adopted by the City of San Ramon or Contra Costa County for their respective facilities.

Transit Facilities

Generally, a plan/project causes a significant impact to transit facilities and services if an element of it conflicts with existing or planned transit services. The evaluation of transit facilities shall consider if:

- A plan or project creates demand for public transit services above the capacity that is provided, or planned;
- A plan or project or related mitigation disrupts existing transit services or facilities;
- A plan or project or related mitigation conflicts with an existing or planned transit facility; or
- A plan or project or related mitigation conflicts with transit policies adopted by the City of San Ramon or Contra Costa County for their respective facilities.

Bicycle and Pedestrian Facilities

The 2040 General Plan describes the related policies necessary to ensure that pedestrian and bicycle facilities are safe and effective for City residents. Using the 2040 General Plan as a guide, significant impacts to these facilities would occur when a plan or project:

- Creates a hazardous condition that currently does not exist for pedestrians and bicyclists, or otherwise interferes with pedestrian accessibility to the site and adjoining areas; or
- Conflicts with an existing or planned pedestrian or bicycle facility; or
- Conflicts with policies related to bicycle and pedestrian activity adopted by the City.

Design Feature Hazards

The impact would be significant if a plan/project resulted in transportation facilities that do not conform to applicable City and industry design standards for roadways, bicycle facilities, and pedestrian facilities.

Emergency Access

The City does not have significance thresholds related to emergency access. The City Municipal Code adopts the California Fire Code and amends the code to address local conditions. Therefore, this EIR evaluates the proposed plan using the significance threshold provided by the California Fire Code as follows:

- Multiple-family Residential Projects having more than 100 dwelling units should provide two separated and approved fire apparatus access roads.
- Development of one or two-family dwellings where the number of dwelling units exceed 30 units shall be provided with two separate and approved fire apparatus access roads.
- Provide a fire apparatus access road that has a minimum width of 20 feet with turning radii of 25 feet inside and 45 feet outside.

In addition, the following factors determine whether a plan or project has sufficient access for emergency vehicles, including:

- Location of closest fire stations
- Number of access points (both public and emergency access only)
- Width, height, and turning radius of access points
- Width, height, and turning radius of roadways

Impact Evaluation

Consistency with Circulation System Programs

Significance Criterion a:	Would the proposed plan conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Impact TRA-1 IMPLEMENTATION OF THE 2040 GENERAL PLAN COULD CONFLICT WITH A PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING THE CIRCULATION SYSTEM, INCLUDING ROADWAY, TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES DURING CONSTRUCTION. HOWEVER, OPERATIONAL IMPACTS WOULD NOT CONFLICT WITH POLICIES ADDRESSING THE CIRCULATION SYSTEM. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Construction

ROADWAY, TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES

Construction activities related to implementation of the 2040 General Plan could create potential conflicts with other roadway, transit, bicycle, and pedestrian users, such as construction related activities resulting in lane, bicycle path, or sidewalk closures along the frontages of individual development projects facilitated by the proposed plan, construction vehicles queuing within the public right-of-way waiting entry to the site, construction worker parking in non-designated parking areas, or construction debris on public streets. Construction impacts would be temporary in nature and encroachment permits from Caltrans would be required for facilities under its administration, such as I-680. However, construction could still occur along local streets, transit routes, bicycle paths, and sidewalks, and Mitigation Measure TRA-1 would be required to reduce impacts. Therefore, with respect to conflicts with circulation system policies related to roadway, transit, bicycle, and pedestrian facilities, construction impacts of the 2040 General Plan would be less than significant with mitigation.

Operation

ROADWAY FACILITIES

The 2040 General Plan includes modifications to existing street facilities to create a more pedestrian- and bicycle-oriented street network. These modifications could cause existing and future local and regional traffic to circulate differently. The expected influence on existing and future traffic would be minimal because roadway modifications would conform to State and local standards and generally be implemented to improve circulation. Overall, the 2040 General Plan's proposed bicycle and pedestrian improvements would not conflict with existing or planned roadway

facilities because the proposed street changes are additions of pedestrian and bicycle facilities and do not specifically propose any reduction in vehicle lanes. While the City has the ability to consider lane reductions to facilitate provision of new bicycle facilities, such projects would be subject to the appropriate planning and environmental review processes at the time that they are proposed.

The 2040 General Plan includes policies that would support development consistent with applicable plans, such as Plan Bay Area 2050 and Contra Costa CTP. In addition, the following 2040 General Plan Traffic and Circulation Element guiding policies and implementing policies related to roadway facilities would ensure consistency:

Guiding Policy 5.2-G-1: Actively participate in local and regional transportation planning.

- **Policy 5.2-I-1** Continue to develop and implement Action Plans for Routes of Regional Significance, in cooperation with the Southwest Area Transportation Committee (SWAT), the Contra Costa Transportation Authority (CCTA), and the Tri-Valley Transportation Council (TVTC).
- **Policy 5.2-I-2** Continue to implement the Tri-Valley Transportation Action Plan through participation in the Tri-Valley Transportation Council (TVTC).
- **Policy 5.2-I-5** Emphasize regional transportation demand management and trip reduction strategies as alternatives to improvements to existing transportation facilities and the construction of new transportation facilities.

Guiding Policy 5.3-G-1: Encourage transportation facilities that consider the users' safety and allow for all modes of travel based on local conditions and needs of the community.

- **Policy 5.3-I-1** Maintain and periodically update Complete Streets Guidelines that establish local review and assessment criteria and encourage development of a multimodal transportation network to meet community needs.
- **Policy 5.3-I-2** Implement Complete Streets principles, as appropriate, for new roadway design and significant roadway rehabilitation.
- **Policy 5.3-I-3** Coordinate the implementation of Complete Streets concepts, as appropriate, with ongoing transportation and congestion relief programs such as the TDM Program, Street Smarts Traffic Safety Program, Residential Traffic Calming Program, Safe Routes to School Program and TRAFFIX Program.
- **Policy 5.3-I-5** Consider the access and mobility needs of special needs groups such as seniors and persons with disabilities in the implementation of all Complete Streets projects.

Guiding Policy 5.4-G-1: Design arterial roadways to efficiently move inter-city traffic, thereby minimizing through-traffic in residential areas of the City.

- **Policy 5.4-I-1** Ensure that adequate north-south and east-west arterial capacity is provided to accommodate future travel demand and, where appropriate, implement Complete Streets concepts pursuant to Policy 5.3-G-1.
- **Policy 5.4-I-2** Implement the City's five-year Capital Improvement Plan.
- **Policy 5.4-I-3** Construct capacity and roadway efficiency improvements necessary to serve growth generated by development under the General Plan.

Policy 5.4-I-4 Maximize the carrying capacity of arterial roadways by controlling the number of intersections, minimizing residential and commercial driveway access, minimizing on-street parking, and requiring off-street parking strategies to meet the needs of each proposed project.

Policy 5.4-I-6 Make optimal use of federal, State, and other funding sources to complete circulation system improvements.

Policy 5.4-I-7 Minimize congestion on arterials by implementing the policies in the Complete Streets, Transportation Demand Management and Public Transit sections of the Circulation Element.

Policy 5.4-I-8 Encourage regional freight movement on freeways and other appropriate routes; evaluate and implement vehicle weight limits as appropriate on arterial, collector and local roadways to mitigate truck traffic impacts in the community.

Policy 5.4-I-9 Specify hauling routes for transporting hazardous materials that minimize the risk to people and property.

Guiding Policy 5.5-G-1: Design collector and local roadways to improve circulation and to connect residential and commercial areas of the City while incorporating Complete Streets concepts pursuant to Policy 5.3-I-2 where appropriate.

Policy 5.5-I-1 Implement residential traffic calming measures, as warranted, and police enforcement to mitigate speeding and other traffic impacts in residential areas of the City.

Policy 5.5-I-2 Continue to implement traffic-control measures and design features that support the City's goals for collector roadways.

Policy 5.5-I-3 Continue to implement traffic-control measures, residential traffic calming, and design features that support the City's goals for local roadways.

Policy 5.5-I-4 Construct capacity and roadway improvements necessary to serve growth generated by development under the General Plan.

Implementation of the above 2040 General Plan policies would ensure consistency with circulation system policies related to roadway facilities. Buildout of the 2040 General Plan land use plan would lead to an approximately 34 percent increase in residential units and a 6.5 percent increase in non-residential uses, which in turn would increase the vehicle travel demand on the San Ramon roadway network. Increased vehicle travel demand may result in increased congestion, because no roadway widenings are proposed as part of the 2040 General Plan. It is important to note that full build-out of all parcels to their maximum capacity may not materialize by 2040.

Growth associated with implementation of the 2040 General Plan could interfere with the operation of existing roadway facilities or conflict with planned roadway facilities; however, implementation of the aforementioned roadway facility policies would minimize such potential conflicts. Therefore, with respect to conflicts with circulation system policies related to roadway facilities, operational impacts of the 2040 General Plan would be less than significant.

TRANSIT FACILITIES

Development under the 2040 General Plan would not obstruct existing transit services or facilities, nor would it conflict with existing or planned facilities. All new development would be subject to

City discretionary review, allowing the City to ensure that project designs would not interfere with transit operations. Buildout of the 2040 General Plan would increase the number of potential transit users on the various transit systems serving the city. Increased users would result in a correlated increase in demand for transit. Additionally, roadway traffic congestion caused from population and employment growth in the city facilitated by the 2040 General Plan could affect transit corridors by increasing travel times and decreasing headway reliability for transit vehicles.

The 2040 General Plan includes policies that would support development consistent with applicable plans, like Plan Bay Area 2050 and Contra Costa CTP. The 2040 General Plan Traffic and Circulation Element guiding policies and implementing policies 5.3-G-1, 5.3-I-1, 5.3-I-2, 5.3-1-3, 5.3-I-5, 5.2-G-1, 5.2-I-1, 5.2-I-2, 5.2-I-5, 5.4-G-1, 5.4-I-1, 5.4-I-7, as well as the following goals and policies would support improving transit connectivity:

Guiding Policy 5.1-G-1: Maintain acceptable LOS and ensure that future land uses and the circulation system are in balance.

Policy 5.1-I-7 Implement the following transportation programs: Transportation Demand Management Program (TDM) Program, Street Smarts Traffic Safety Program, Residential Traffic Calming Program, and TRAFFIX Program.

Policy 5.2-I-6 Identify and consider the impacts of land use decisions on regional as well as local transportation facilities.

Policy 5.3-I-4 Encourage Complete Streets concepts as a VMT and greenhouse gas reduction strategy.

Guiding Policy 5.6-G-1: Utilize Transportation Demand Management (TDM) strategies as an integral component of the City's transportation program to reduce total vehicle trips and VMT on San Ramon roadways and reduce the corresponding vehicle emissions that promote regional air quality improvements.

Policy 5.6-I-1 Engage with public agencies and other jurisdictions to promote local and regional public transit service in San Ramon as part of a multimodal and Complete Streets strategy.

Policy 5.6-I-2 Encourage and assist major employers and property managers of commercial sites with 50 or more employees to reduce the number of single-occupant vehicles by participating in the City's TDM programs, including the commuter benefit program, and programs provided by the Bay Area Air Quality Management District.

Policy 5.6-I-3 Encourage additional local bus or other public transportation service providers to and from regional transit lines. The City shall strive to improve the transit service to and from all neighborhoods and commercial districts in San Ramon.

Policy 5.6-I-4 Preserve options for future public transit and alternative transportation uses when designing improvements for roadways such as Bollinger Canyon Road Corridor within Dougherty Valley.

Policy 5.6-I-5 Encourage future transit uses within the I-680 corridor right-of-way and within the City of San Ramon.

Policy 5.6-I-6 Engage with other jurisdictions and agencies to coordinate the City's TDM programs with regional plans and action plans that are aimed at reducing traffic congestion and VMT, and improving air quality.

Policy 5.6-I-8 Encourage alternative public transportation programs and obtain funding for new TDM projects or programs.

Policy 5.6-I-9 Encourage employers and commercial complexes to emphasize public transit services or private alternatives to the single-occupant vehicle.

Policy 5.6-I-10 Work with transit providers to situate amenity rich transit stops and shelters at convenient and safe locations.

Policy 5.6-I-11 Promote increased transit ridership through the use of Transportation Management Associations and other employer-based transit programs, equip buses with bike racks, and make transit information readily accessible in a smart phone-friendly format.

Policy 5.6-I-12 Coordinate with Caltrans and transit providers to identify and implement park and ride lots with updated amenities with convenient access to public transit facilities, often called mobility hubs.

Policy 5.6-I-13 Work with the San Ramon Valley Unified School District and other appropriate agencies and organizations to reduce vehicle trips through the provision of transit programs, the TRAFFIX school bus program and promoting carpooling, bicycling, and walking.

Policy 5.6-I-15 Work with local transit providers to increase and expand weekend transit service and late night service from regional rail and transit hubs.

Policy 5.6-I-16 Explore opportunities for the location or relocation of a transit center and/or multiple Mobility Hubs within Bishop Ranch Business Park to better geographically balance the public transit needs for the City.

Guiding Policy 5.6-G-2: Encourage trip reduction measures in an effort to reduce VMT, improve air quality, and reduce greenhouse gas emissions.

Policy 5.6-I-19 Encourage infill, Transit-Oriented Development (TOD) and first and last mile transit access connections as vehicle-miles-traveled reduction strategies for existing and proposed development.

2040 General Plan guiding policies and policies listed above encourage an increase in transit ridership, decreased dependence on motor vehicles, and reduce transit delays. While the proposed plan could add peak hour transit riders, implementation of the proposed plan would not disrupt existing or interfere with planned transit services or facilities.

The CCTA CTP contains goals and policies, as listed under Section 3.12.3, *Regulatory Framework*, to manage the County's transportation system, including several policies relating to the preservation and enhancement of transit service, in partnership with local jurisdictions, as the County grows. These goals and policies are consistent with the 2040 General Plan guiding policies and implementing policies and would result in coordinated planning for the expansion of transit service to meet demand as San Ramon grows under the 2040 General Plan.

Implementation of the above 2040 General Plan policies would ensure consistency with circulation system policies related to transit facilities. Therefore, with respect to conflicts with circulation system policies related to transit facilities, operational impacts of the 2040 General Plan would be less than significant.

BICYCLE FACILITIES

Growth in residential and non-residential uses under the 2040 General Plan could result in more bicycle use on existing facilities. The 2040 General Plan includes complete streets policies, new bicycle facilities, and transportation and circulation goals and policies to accommodate increased bicycle demands generated by new development. This network would accommodate bicycle demand generated by the land development. The City sets forth approved future upgrades and new facilities to create a safe and connected bike network throughout San Ramon in the San Ramon Bicycle Master Plan, some of which may occur simultaneously with development facilitated by the proposed plan. Figure 3.12-4 shows the approved future network.

Examples of guiding policies and implementing policies consistent with applicable plans, like Plan Bay Area 2050,Contra Costa CTP, and San Ramon Bicycle Master Plan in the 2040 General Plan that would encourage bicycle transportation modes while also ensuring bicycle facilities are adequate include those listed under the *Transit Facilities* impact discussion above, 2040 General Plan Traffic and Circulation Element guiding policies 5.1-G-1 and 5.6-G-1, and the following guiding policies and implementing policies:

Policy 5.1-I-8 Implement a Safe Routes to School Program to address access and safety issues on streets adjacent to schools in San Ramon.

Policy 5.6-I-7 Encourage new development to include a mix of uses and Complete Streets concepts that will allow people to walk and bike between destinations and reduce the amount of automobile VMT.

Guiding Policy 5.7-G-1: Encourage bicycling and walking as alternatives to driving, consistent with Complete Streets concepts.

Policy 5.7-I-1 Establish a network of on- and off-street bicycle routes to encourage their use for commute, recreational, and other trips. Improve and expand bicycle routes for commuters in San Ramon and between San Ramon and neighboring jurisdictions.

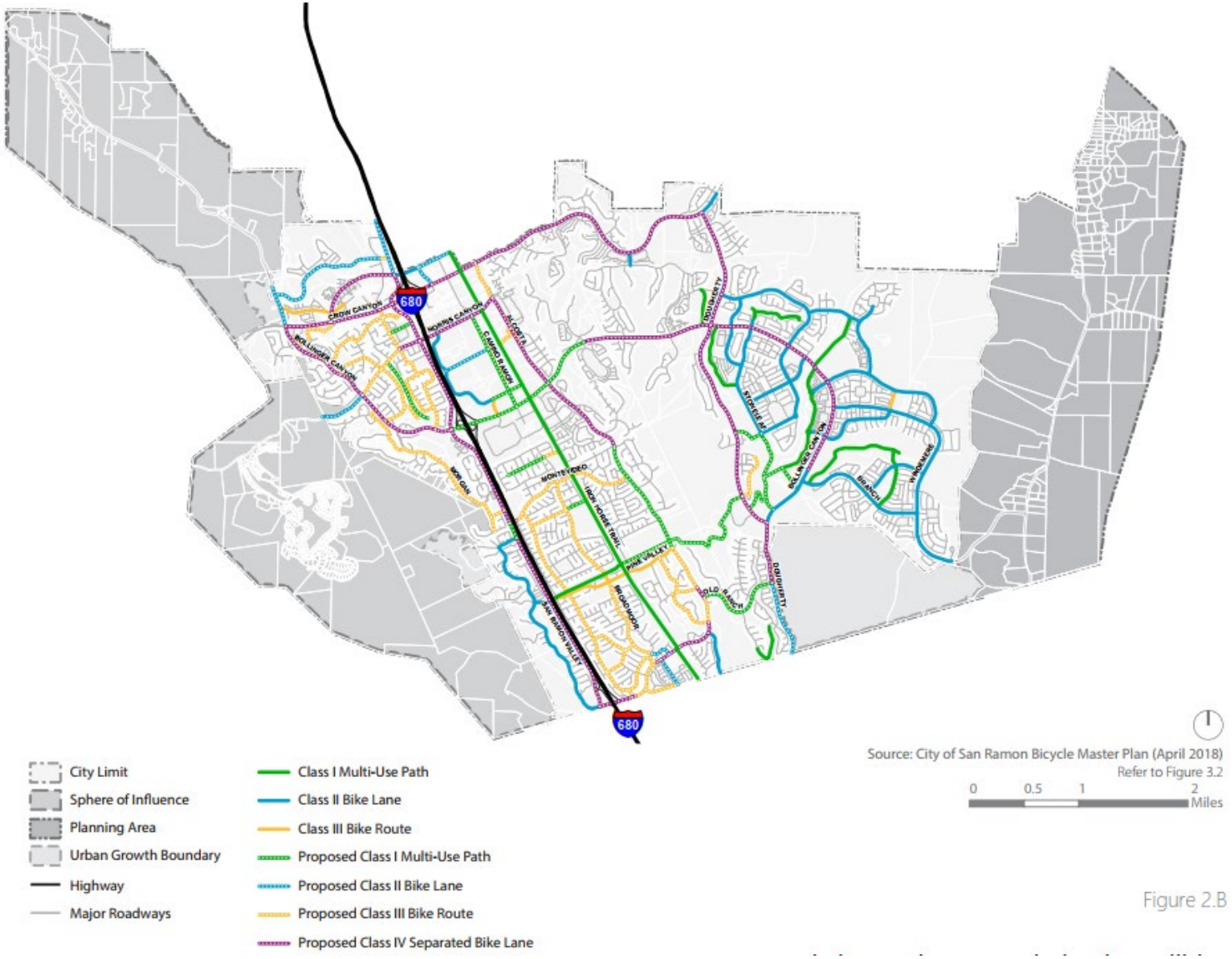
Policy 5.7-I-2 Develop bicycle routes that provide access to regional employment centers, shopping centers, public facilities, transit centers, schools, and parks.

Policy 5.7-I-3 Continue to emphasize the Iron Horse Trail as a major north-south route for non-motorized modes of transportation including walking, biking, rollerblading, and scooters by improving connectivity and enhancing amenities for these modes.

Policy 5.7-I-4 Encourage future development along the Iron Horse Trail corridor to provide connection points and adjacent amenities, as appropriate.

Policy 5.7-I-5 Require bicycle parking, storage, and other support facilities as part of new office, retail, housing, and public facilities developments.

Figure 3.12-4 Approved Future Major Bicycle Facilities in General Plan Area



Policy 5.7-I-6 Continue to promote and implement through the development review process, continuous circulation facilities within commercial districts and residential neighborhoods to enhance connectivity, and promote pedestrian and bicycle modes of transportation consistent with Complete Streets concepts.

Policy 5.7-I-8 Pursue grant funding for implementation of projects identified in the adopted Bicycle Master Plan and Walking District Master Plan, including funding from State and regional sources.

Policy 5.7-I-9 Implement roadway improvement projects to minimize both temporary and permanent reductions in bicycle and pedestrian mobility and/or accessibility.

Policy 5.7-I-10 Work with neighboring jurisdictions to ensure that continuity in bicycle and pedestrian networks is provided at jurisdictional boundaries.

Policy 5.7-I-11 Work with Caltrans and other appropriate agencies to improve bicycle and pedestrian mobility at freeway crossings.

Policy 5.7-I-13 Prioritize bicycle network improvements in the core area of San Ramon, including construction of new facilities and actions to remove barriers to cycling as identified in the San Ramon Bicycle Master Plan, in order to support development in the City's Priority Development Areas (PDAs).

The 2040 General Plan would encourage bicycling by improving bicycle connectivity with a comprehensive community-wide network of on-street and off-street bicycle facilities that would be defined in the City of San Ramon Bicycle Master Plan. Implementation of the 2040 General Plan would not interfere with existing bicycle facilities or conflict with planned bicycle facilities or adopted bicycle system plans, guidelines, policies, or standards. Furthermore, implementation of the 2040 General Plan would create new bicycle facilities consistent with the San Ramon Draft Bicycle Master Plan that in turn would have a beneficial effect on bicycle circulation and access. Therefore, with respect to conflicts with circulation system policies related to bicycle facilities, operational impacts of the 2040 General Plan would be less than significant.

PEDESTRIAN FACILITIES

Growth in residential and non-residential uses under the 2040 General Plan could result in more use and demand on existing pedestrian facilities. The 2040 General Plan includes complete streets policies, new pedestrian facilities, and transportation and circulation guiding policies and implementing policies to accommodate increased pedestrian demands generated by the development envisioned in the 2040 General Plan. The 2040 General Plan would encourage walking by improving pedestrian facilities and connectivity with a safe and continuous pedestrian network to shorten walking distances and improve pedestrian connections to popular local destinations. Examples of Traffic and Circulation Element guiding policies and implementing policies in the 2040 General Plan that would encourage walking trips and ensure pedestrian facilities are adequate and include guiding policies and implementing policies 5.3-G-1, 5.3-I-1, 5.3-I-2, 5.3-1-3, 5.3-1-4, 5.3-1-5, 5.6-G-1, 5.6-I-7, 5.6-I-13, 5.7-G-1, 5.7-I-3, 5.7-I-4, 5.7-I-6 through 5.7-I-12, which are listed under *Transit Facilities* and *Bicycle Facilities* above.

Implementation of these 2040 General Plan policies would ensure consistency with circulation system policies related to pedestrian facilities. Therefore, with respect to conflicts with circulation system policies related to pedestrian facilities, operational impacts of the 2040 General Plan would be less than significant.

Mitigation Measure

MITIGATION MEASURE TRA-1 PREPARE AND IMPLEMENT CONSTRUCTION TRAFFIC MANAGEMENT PLANS

Prior to issuance of building permits, the contractor for an individual development project that requires off-site staging, lane closures, or substantial hauling of cut and fill on a local street (i.e., not under Caltrans' jurisdiction) shall prepare a Construction Traffic Management Plan that includes measures such as, but not limited to, the following as deemed necessary by the City. The approved Construction Traffic Management Plan shall be implemented during construction.

- Provide a temporary traffic signal, if necessary
- Project Staging Plan to maximize on-site storage of materials and equipment
- A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak-hours; lane closure proceedings; signs, cones, and other warning devices for drivers; and designation of construction access routes
- Permitted construction hours
- Location of construction staging
- Identification of parking areas for construction employees, site visitors, and inspectors, including on-site locations
- Provisions for street sweeping to remove construction related debris on public streets

Level of Significance

Less than significant with mitigation

Vehicle Miles of Travel

Significance Criterion b:	Would the proposed plan conflict or be inconsistent with *CEQA Guidelines* Section 15064.3, subdivision (b)?

Impact TRA-2 IMPLEMENTATION OF THE 2040 GENERAL PLAN WOULD CONFLICT OR BE INCONSISTENT WITH *CEQA GUIDELINES* SECTION 15064.3, SUBDIVISION (B). IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE EVEN WITH MITIGATION.

Construction

Impacts related to *CEQA Guidelines* Section 15064.3, subdivision (b) are limited to operational impacts. No respective construction impacts would occur because construction is temporary in nature and, while it may marginally generate VMT from construction worker trips or road detours, does not substantially impact regional VMT.

Operation

The Contra Costa Countywide Travel Demand Model was adjusted to reflect the relevant land use growth for with and without 2040 General Plan implementation, as described under *Approach to*

Analysis. Table 3.12-2 presents the VMT results for the home-based VMT[14] per resident. Table 3.12-3 presents the results for the home-work VMT[15] per employee.

Table 3.12-2 General Plan Area-wide Home-Based VMT Summary

Scenario	Home-Based VMT	Residents	Home-Based VMT Per Resident	County Average Home-Based VMT per Resident
2022 Baseline	1,681,358	82,472	20.4	17.2
Threshold[1]	---	---	**17.3**	**---**
2040 With Existing General Plan Buildout	1,866,985	98,244	19.0	16.1
2040 With General Plan Update Buildout	1,949,237	104,864	**18.6**	16.0
Does Plan meet Threshold?	---	---	No	---

[1.] 85 percent of 2022 Baseline Countywide Average

Source: CCTA Travel Demand Model; Fehr & Peers, May 2023.

Table 3.12-3 General Plan Area-wide Home-Work VMT Summary

Scenario	Home-Work VMT	Employees	Home-Work VMT per Employee	County Average Home-Work VMT per Employee
2022 Baseline	790,561	52,564	15.0	15.0
Threshold[1]	---	---	**12.8**	**---**
2040 With Existing General Plan Buildout	919,176	61,283	15.0	15.2
2040 With General Plan Update Buildout	910,270	61,283	**14.9**	15.2
Does Plan meet Threshold?	---	---	No	---

[1] 85 percent of 2022 Baseline Countywide Average

Source: CCTA Travel Demand Model; Fehr & Peers, May 2023.

The analysis indicates that the San Ramon VMT per resident of 20.4 miles-per-resident is higher than the Countywide average VMT per resident of 17.2 miles-per-resident in the 2022 baseline and is projected to remain higher than the Countywide average VMT per resident in 2040 for both the existing General Plan and proposed 2040 General Plan buildout scenarios. Further, the San Ramon Home-Work VMT per employee of 15 miles-per-resident is the same as the Countywide average Home-Work VMT per employee in the 2022 baseline and is projected to be slightly lower than the Countywide average VMT per resident in 2040 for both the existing General Plan and 2040 General Plan buildout scenarios.

Home-Based VMT rates in the County as a whole, and in San Ramon, are projected to decline between 2022 and 2040. Home-Work VMT rates in the County and in San Ramon are projected to stay relatively similar between 2022 and 2040. The Home-Based and Home-Work VMT rates in San Ramon are projected to be greater than 85 percent of the baseline Countywide average for both the existing General Plan and 2040 General Plan buildout scenarios. The 2040 General Plan Update buildout scenario projects marginally lower Home-Based and Home-Work VMT rates than if the existing General Plan were built out.

[14] Home-based VMT is VMT generated by trips to and from the home, made by residents, deliveries, etc., and excludes trips made by residents between non-home locations (such as trips between their workplace and other destinations during the day).
[15] Home-work VMT is VMT generated by employee trips between the home and the workplace, and excludes other workplace trips such as visitors, vendors, and deliveries.

Development facilitated by the 2040 General Plan would result in marginal reductions in VMT per capita and VMT per employee from existing conditions, but VMT per employee would still exceed the impact threshold. Implementing the 2040 General Plan policies listed above under Impact TRA-1 would reduce VMT through promoting accessibility, encouraging non-vehicle transportation modes, and improving access to transit services. Even with the 2040 General Plan policies to reduce VMT, it is possible that VMT per employee would still remain above applicable thresholds. Although VMT per capita and employee would be reduced as a result of the 2040 General Plan, according to OPR guidance on the application of SB 743, a VMT impact is still significant if VMT per capita or employee remains above 15 percent below the existing baseline. Thus, with respect to consistency with *CEQA Guidelines* Section 15064.3, subdivision (b), the operational VMT impact of the 2040 General Plan would be significant and unavoidable since VMT per resident and employee would be greater than 17.3 and 12.8, respectively, in the 2040 General Plan area, and Mitigation Measure TRA-2 would be required.

Available project characteristics modification and TDM measures are included under Mitigation Measure TRA-2. CCTA also includes participation in a CCTA-approved VMT impact fee program and/or VMT mitigation exchange/banking program, but CCTA is still developing such a program. City of San Ramon requirement to participate in this program is also included under Mitigation Measure TRA-2.

Due to unknown future conditions at the time of future projects facilitated by the 2040 General Plan and the uncertainty of the effectiveness of VMT reduction measures under Mitigation Measure TRA-2 to guarantee a reduction of VMT below thresholds, operational VMT impacts of the 2040 General Plan would remain significant and unavoidable even with mitigation.

Mitigation Measure

MITIGATION MEASURE TRA-2 PREPARE AND IMPLEMENT VMT REDUCTION MEASURES

The CCTA's *Growth Management Program Implementation Guide* (revised February 17, 2021), Appendix F (CCTA Recommended Methodology) describes options for mitigation of VMT impacts. The first two options below apply to development project and plans, and the third applies at a General Plan area-wide scale.

1. A project applicant shall modify a project's characteristics to reduce VMT generated by such project prior to issuance of an occupancy permit. This might involve changing the density or mixture of land uses on a project site, or changing a project's location to one that is more accessible by transit or other travel modes.
2. A project applicant shall implement transportation demand management (TDM) or physical design measures to reduce VMT generated by a project prior to issuance of an occupancy permit.
3. The City shall participate in a CCTA-approved VMT impact fee program and/or VMT mitigation exchange/banking program, once it is completed and published by CCTA. (Note that CCTA is developing such a program for Contra Costa County.)

When option 2 (TDM plan) is applied for future land use development projects facilitated by the 2040 General Plan that do not meet CCTA screening criteria and thresholds, the City shall require preparation and implementation of a project-level TDM plan with the following TDM measures.

Table 3.12-4 TDM Measures

CAPCOA Handbook Measure	Types of Projects	Core Elements
T-7: Commute Trip Reduction Marketing	Employment-based	*Thoughtful marketing strategy *Readily available commute information *Designated TDM Coordinator *Guaranteed Ride Home
T-8: Provide Ridesharing Program	Employment-based	*Participation in a TMA with ride-matching program *Preferential parking policies for carpools *Promotions and incentives such as gas cards at carpool formation
T-9: Implement Subsidized or Discounted Transit Program	Residential, School, Employment-based	*Location within 1/2 mile of major transit stop or high-quality transit corridor *Participation in Commuter Benefits Program *Easy to sign up for incentives
T-11: Provide Employer Sponsored Vanpool / Point-to-Point Shuttles	Employment-based	*Coordinate logistics of vanpool program *Cover vanpool fares for riders through commute benefits program *Promote and facilitate vanpool creation
T-12: Price Workplace Parking	Employment-based	*Location within 1/2 mile of transit service *Priced at least $5 per day *On-street parking nearby is not readily available
T-13: Implement Employee Parking Cashout	Employment-based	*Parking is provided as benefit *On-street parking nearby is not readily available *Participants pledge to not drive to work
T-16: Unbundle Residential Parking Costs	Residential	*On-street parking nearby is not readily available *All parking is priced at a rate at least $30 per month
T-23: Community-Based Travel Planning	Residential, Retail, School	*Proactive outreach to all households in service area or project *Program Coordinator designated as lead in promoting non-auto transportation
T-10: Provide End-of-Trip Bicycle Facilities	All Projects	*Provision of secure bicycle parking in the form of lockers, a locked storage room, or an attended storage facility *(For non-residential): Provision of lockers, showers, and changing rooms
T-21A: Implement Carshare Program / Provide Carshare Parking	All Projects	*Dedicate parking for carshare vehicles *Identify carshare partner
T-15 Reduce Parking Supply	Residential	*On-street parking nearby is not readily available
T-18: Provide Pedestrian Network Improvements:	All Projects	Completion of one or more projects identified in the San Ramon Bicycle Master Plan
T-19-A and T-19-B: Construct or Improve Bicycle Facility/Bicycle Boulevard	All Projects	
T-20: Expand Bikeway Network	All Projects	
T-26 Increase Transit Frequency	All Projects in PDAs	Increase the frequency of transit service by providing funding for more operators and vehicles
T-25 Increase Transit Coverage	All Projects	Expand transit service to areas without access to it, or expand to later/earlier hours.

CAPCOA Handbook Measure	Types of Projects	Core Elements
T-23: Community-Based Travel Planning	Residential, Retail, School	*Proactive outreach to all households in service area or project *Program Coordinator designated as lead in promoting non-auto transportation
T-22: Bikeshare/Scootershare	All Projects in PDAs	Fund and implement program providing e-bikes or scooters available on demand. Ideally pursue a "dockless" system.
Free E-Bike Program	All Projects	Provide e-bikes free of charge to households pledging to reduce vehicle trips

Source: *Handbook for Analyzing Greenhouse Gas Emissions Reductions, Assessing Climate Change Vulnerabilities, and Advancing Health and Equity* (CAPCOA, December 2021).

Feasible options listed under Table 3.12-4 to reduce VMT below CCTA thresholds shall be implemented for individual projects facilitated by the 2040 General Plan. VMT reduction measures shall be included at project design review and be reviewed and approved by the City prior to issuance of construction permits.

Level of Significance

Significant and unavoidable

Roadway Design Safety Hazards

Significance Criterion c:	Would the proposed plan substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

Impact TRA-3 IMPLEMENTATION OF THE 2040 GENERAL PLAN WOULD NOT SUBSTANTIALLY INCREASE HAZARDS BECAUSE OF A GEOMETRIC DESIGN FEATURE (E.G., SHARP CURVES OR DANGEROUS INTERSECTIONS) OR INCOMPATIBLE USES (E.G., FARM EQUIPMENT). IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Construction of the proposed plan is anticipated to utilize vacant areas within the plan area to accommodate storage of large construction vehicles. Such staging areas would reduce the amount of heavy construction vehicles using adjacent roads. During construction, truck deliveries would be expected to use collectors and would avoid adding additional heavy duty truck traffic on feeder streets and local streets. Furthermore, these truck routes are specifically designated to avoid impacts to pedestrian and bicyclists. Thus, because the construction trucks would travel along the designated truck routes, there would not be a conflict with the automobile vehicle, transit, bicycle, and pedestrian design and activity along roadways on and near the plan area. Therefore, construction impacts related to roadway design safety hazards would be less than significant.

Operation

Development facilitated by the 2040 General Plan would increase the number of users on the San Ramon transportation system, which could increase transportation circulation design safety hazards associated with future projects in the General Plan area. Primary operational vehicular access to and through the General Plan area would be provided by existing signalized intersections and highways.

Improvements to the transportation and circulation system in the San Ramon Planning Area would be implemented over time through buildout year of 2040. San Ramon maintains improvement standards that guide the construction of new transportation facilities to minimize design hazards for all users of the system. Through the environmental review process, land use proposals that would add traffic to streets not designed to current standards are evaluated. If needed, mitigation measures are identified therein, and the project is conditioned to construct or provide funding for an improvement that would minimize or eliminate the hazard. Typical improvements Include shoulder widening, adding turn pockets, adding sidewalks or crosswalks, realigning sharp curves, prohibiting certain turning movements, signalizing intersections, and increasing sight distance, among other measures. New and upgraded roadways needed to accommodate new development would be designed according to applicable Federal, State, and local design standards. Development and infrastructure projects in San Ramon would be required to comply with the General Plan Update, San Ramon Municipal Code, and applicable State and local regulations.

The 2040 General Plan establishes Traffic and Circulation Element guiding policies and policies 5.1-G-1, 5.1-I-8, 5.3-G-1, 5.3-I-2, and 5.3-1-5, 5.4-G-1, 5.4-I-2, 5.4-I-3, 5.4-I-4, 5.4-I-8, 5.5-G-1, 5.5-I-1, 5.5-I-2, 5.5-I-3, and 5.5-I-4 as well as the following Traffic and Circulation Element policies to result in roadway designs that safely accommodate all users:

Policy 5.1-I-3 Require new development provide traffic impact studies if the project would generate 50 or more net new peak hour vehicle trips and a VMT assessment based on adopted local, regional, and/or State technical criteria. Preparation of traffic impact studies and/or VMT assessments may also be determined or waived by the City Traffic Engineer.

Policy 5.1-I-4 Identify and implement mitigations based on traffic studies and VMT assessments.

Policy 5.1-I-5 Implement uniform design standards for City arterials, collectors, local streets, and private roadways.

The above 2040 General Plan guiding policies and implementing policies would result in roadway designs that safely accommodate all users including pedestrians, bikes, and vehicles. Therefore, 2040 General Plan operational impacts related to increases of hazards due to design features would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Emergency Vehicle Access

Significance Criterion d: Would the proposed plan result in inadequate emergency access?

Impact TRA-4 IMPLEMENTATION OF THE 2040 GENERAL PLAN WOULD NOT HAVE THE POTENTIAL TO RESULT IN INADEQUATE EMERGENCY ACCESS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Construction

Impacts related to inadequate emergency access are limited to operational impacts. During future projects construction, two-way travel would be maintained. Should any roadways in the General Plan area experience temporary one-way travel restrictions or be closed to travel, there are multiple access routes to these plan areas, and construction detour signage would be provided. No respective construction impacts would occur.

Operation

As discussed in Section 3.9, *Land Use/Planning and Population/Housing,* the 2040 General Plan would result in an increase in population and development. Development facilitated by the 2040 General Plan would be required to meet all applicable current State and local codes and ordinances related to fire protection, which includes emergency access.

As mentioned in Section 3.11, *Public Services and Recreation,* development facilitated by the General Plan would be adequately served by San Ramon Valley Fire Protection District. Further, as mentioned in Section 3.7, *Hazards/Hazardous Materials and Wildfire,* development facilitated by the General Plan would not impede emergency access and response. Therefore, development within the General Plan area would be adequately served in case of a fire-related emergency. Development facilitated by the General Plan would be required to provide adequate accommodation of fire access to structure frontages, multiple access points to development, as well as adequate width, height, and turning radius of roadways and access points, pursuant to California Building Code requirements. Future projects that would not meet required standards and codes would not be allowed to be permitted by the City. Development facilitated by the General Plan would be required to comply with City and County standards and requirements and would undergo review by public safety officials as part of the approval process.

Emergency vehicle response times would continue to be reduced over time due to the ability of emergency vehicles to use vehicle preemption technology (where possible) and sirens; this capability would remain regardless of any roadway capacity modification. Roadway segments that would experience a reduction in vehicular roadway capacity, if any, would undergo individual operations analyses to assess the potential impacts to emergency vehicle access, and mitigation measures would be developed as needed to reduce potentially significant impacts to less than significant levels. Additionally, development within the General Plan area would be required to comply with the California Fire Code, such as providing two separated and approved fire apparatus access roads that have a minimum width of 20 feet with turning radii of 25 feet inside and 45 feet outside. As such, there would be adequate emergency service and access associated with development facilitated by the General Plan.

Additionally, 2040 General Plan Traffic and Circulation Element guiding policies and implementing policies 5.5-G-1, 5.5-I-1, 5.5-I-2, and 5.5-I-3 as ensure adequate emergency vehicle access to sites throughout San Ramon:

Implementation of California Fire Code emergency vehicle access requirements and the aforementioned 2040 General Plan policies would ensure that there would be adequate emergency vehicle access throughout San Ramon. Therefore, 2040 General Plan operational impacts related to emergency vehicle access adequacy would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

3.12.5 Cumulative Impacts

The transportation impact analysis (see Appendix E) prepared for the proposed plan also accounts for future land use for the entire travel model area, which includes VMT on Contra Costa County roadways that originates within and outside of the County. Adjacent development considered part of the cumulative analysis includes the projects and plan listed in Table 3-1 (refer to Chapter 3, Environmental Impact Analysis).

Vehicle Miles Traveled

OPR provides the following guidance regarding cumulative impacts analysis and VMT:

> When using an absolute VMT metric, i.e., total VMT (as recommended below for retail and transportation projects), analyzing the combined impacts for a cumulative impacts analysis may be appropriate. However, metrics such as VMT per capita or VMT per employee, i.e., metrics framed in terms of efficiency (as recommended below for use on residential and office projects), cannot be summed because they employ a denominator. A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa.

The year 2040 total Countywide VMT per service population (all residents and employees) is shown in Table 3.12-5. These metrics reflect VMT generated by all trips by all land uses in Contra Costa County, as well as non-County generated trips traveling on County roadways (i.e., all VMT within the Contra Costa County boundary). As shown in Table 3.12-5, Countywide boundary VMT per service population would decrease with the proposed plan, reflecting the travel efficiency that generally results from more dense, mixed-use development provided with the proposed plan.

Table 3.12-5 Countywide VMT Summary

Metrics	2022 No Project	2040 with Existing General Plan	2040 with Proposed General Plan Update
Total	25,804,244	29,921,234	29,997,147
County Service Population	1,585,472	1,878,346	1,884,966
VMT/Service Population	16.28	15.93	15.91
Does VMT per service population decrease with Project?	---	---	Yes

Source: CCTA Travel Demand Model; Fehr & Peers, May 2023.

While VMT per service population would decrease Countywide, based on OPR's guidance included above cumulative impacts would be commensurate with plan-level impacts. Because the analysis for the proposed plan is based on Home-Based VMT and Home-Work VMT, the significant VMT impact finding implies that the proposed plan would also have a cumulatively considerable contribution to a significant cumulative impact. Since project-level significance thresholds were designed to support long-term environmental goals, they inherently also address potential cumulative VMT impacts. As such, VMT would be cumulatively considerable. Therefore, the cumulative impact related to VMT would be significant and unavoidable.

Compatibility with Programs, Plans, Ordinances, and Policies Related to Circulation

Cumulative plans and projects, including the proposed plan, would be required to comply with local regulations and policies. The plans' incremental contribution to cumulative impacts would be less than significant.

Roadway Safety and Emergency Vehicle Access

Roadways constructed as part of the proposed plan in conjunction with other cumulative plans and projects listed in Table 3-1 would be constructed to meet current design standards in respective cities. Modifications to public rights-of-way would be consistent with appropriate regulations and design standards set forth by the respective city's applicable plans, programs, and policies. Similarly, cumulative development would also be required to comply with the respective city's regulations and policies. Trucks necessary to construct cumulative development would utilize truck routes designated by the respective cities and would not conflict with the automobile traffic and bicycle and pedestrian activity along respective city streets. If cumulative development would redesign city streets in such a way that would significantly impact roadway safety, they would be required by the respective city to mitigate such impacts. Nevertheless, San Ramon's contribution to potential cumulative roadway safety impacts would not be cumulatively considerable. In addition, driveways and emergency vehicle access points associated with cumulative development would be constructed in compliance with the California Fire Code and other applicable regulations related to roadway safety and emergency access. Therefore, cumulative impacts related to roadway safety and emergency vehicle access would be less than significant.

Overall Level of Cumulative Significance

Significant and unavoidable

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3.13 Utilities and Service Systems

3.13.1 Introduction

This section describes the existing conditions related to utilities and service systems (water, wastewater, stormwater, and solid waste) within the respective utility service areas, which cover the 2040 General Plan area vicinity as well as the relevant regulatory framework. This section also evaluates the impacts related to such utilities and service systems that could result from implementation of the proposed plan. Information in this section is based on information from East Bay Municipal Utility District (EBMUD), the Dublin San Ramon Services District (DSRSD), and the City of San Ramon Department of Public Works. Note that electrical power and natural gas are addressed within Section 3.6, Greenhouse Gas Emissions and Energy.

3.13.2 Environmental Setting

Water

Water Source and Supply

The residences and businesses within the General Plan area are served by two water supply providers: East Bay Municipal Utility District (EBMUD) and Dublin San Ramon Services District (DSRSD). The service area boundaries for these water purveyors are shown on Figure 3.13-1. A description of each of these providers and the water source and supply provided by each is provided below.

EAST BAY MUNICIPAL UTILITY DISTRICT SERVICE AREA

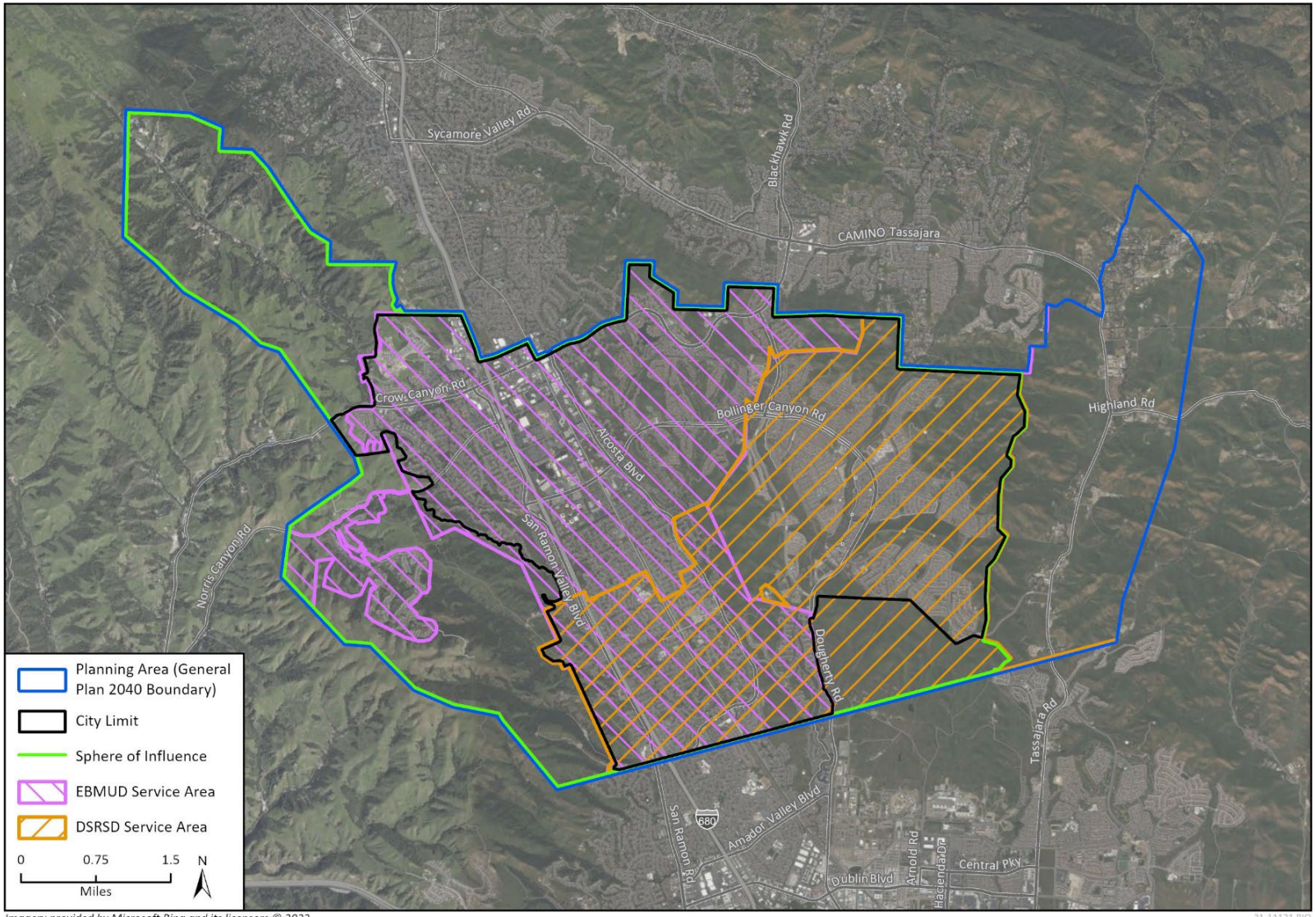
A portion of the water supplied to San Ramon is provided by EBMUD, which provides service to approximately 1.4 million people in a 332-square-mile-area of the San Francisco Bay Area East Bay region.[1] Approximately 90 percent of the raw water entering EBMUD's system originates from the Mokelumne River watershed and approximately 10 percent originates from the protected watershed lands in the East Bay Area. EBMUD water supply sources also include surface runoff which is captured and stored in existing reservoirs including Briones, Chabot, Lafayette, San Pablo, and Upper San Leandro. EBMUD does not currently have supplies of groundwater, stormwater, or desalinated water.[2]

EBMUD's water supply system consists of a network of reservoirs, aqueducts, water treatment plants, pumping plants, and other distribution facilities and pipelines that convey Mokelumne River water from the Pardee Reservoir to the EBMUD service areas. Recycled water is a critical element of EBMUD's water supply management policy and supplements EBMUD's limited drinking water supply, producing approximately 8.3 million gallons per day (mgd) in 2020 from the six existing recycled water projects with potential for additional recycled water projects to take place in the future. EBMUD does not currently have supplies of groundwater, stormwater, or desalinated water.[3]

[1] East Bay Municipal Utility District (EBMUD). 2022. Service area. https://www.ebmud.com/about-us/who-we-are/service-area/. (accessed March 2023).

[3] East Bay Municipal Utility District (EBMUD). 2021. Urban Water Management Plan 2020. https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan/. (accessed March 2023).

Figure 3.13-1 Water Districts in General Plan Area



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Water district boundaries provided by EBMUD and DSRSD, 2023.

21-11121 BIO
Fig 3.13-1 Water Districts in General Plan

DUBLIN SAN RAMON SERVICE DISTRICT SERVICE AREA

DSRSD provides water service to a portion of San Ramon. DSRSD's water facilities store and deliver drinking (i.e., potable) water to its residential and commercial customers in its 337-square-mile-service area covering the City of Dublin and the Dougherty Valley neighborhood in the City of San Ramon,. DSRSD also owns and operates an extensive network of storage, pumping, and pipeline facilities to deliver drinking water to its customers.[4] Within San Ramon, DSRSD provides potable and recycled water services to Dougherty Valley and wastewater collection and treatment services to the southern San Ramon areas. DSRSD provides water service to a portion of the City of San Ramon, and receives its water supply from the Zone 7 Water Agency ("Zone 7"); Zone 7 is a wholesale agency that supplies treated drinking water to retailers serving over a quarter million people, including to the DSRSD through a special agreement for service to the Dougherty Valley area.[5] All water required by DSRSD for use within its service area is obtained by DSRSD from Zone 7, with limited exceptions.[6] DSRSD also has a limited allocation of water from the Livermore Valley Groundwater Basin, which is produced for DSRSD on behalf of Zone 7.

GENERAL PLAN AREA

The General Plan areas obtains 100 percent of its municipal water supply from a combination of EBMUD and DSRSD.

Water Demand and Use

EBMUD SYSTEM AND SERVICE AREA

EBMUD is also responsible for preparing and implementing an UWMP. The EBMUD 2020 UWMP includes an assessment of past and future water supplies and demands, evaluation of the future reliability of the region's water supplies through 2050, and discussion of demand management measures.[7] EBMUD has water rights that allow for delivery of up to a maximum of 325 mgd. In addition, on average, local runoff supplies the East Bay 23 mgd. During multi-year droughts when the Mokelumne River and local runoff alone cannot meet projected customer demand, EBMUD signed a contract with the U.S. Bureau of Reclamation for delivery of Central Valley Project (CVP) water providing for delivery of up to 133,000 acre-feet (AF) or approximately 36,087 mgd in a single qualifying year, not to exceed a total of 165,000 AF or 44,769 mgd in three consecutive qualifying years. The EBMUD UWMP states that the current EBMUD system has capacity to meet water demands during normal, single dry, and second dry year demands through 2050; however, current water supply is not sufficient to meet water demands during third dry years.[8] In 2020, EBMUD also updated its Water Shortage Contingency Plan (WSCP) that provides a framework for EBMUD to help address water shortages that may occur to ensure a reliable water supply.[9]

Demand for water in the EBMUD service area is primarily for municipal and industrial uses that include residential, commercial, institutional, industrial, and irrigation. According to the EBMUD

[4] Dublin San Ramon Services District (DSRSD). 2021. Urban Water Management Plan. https://www.dsrsd.com/home/showpublisheddocument/7749/637607511715070000. (accessed March 2023).

[7] East Bay Municipal Utility District (EBMUD). 2021. Urban Water Management Plan 2020. https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan/. (accessed March 2023).

[8] East Bay Municipal Utility District (EBMUD). 2021. Urban Water Management Plan 2020. https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan/. (accessed March 2023).

[9] East Bay Municipal Utility District (EBMUD). 2021. Water Shortage Contingency Plan 2020. https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan/. (accessed March 2023).

2020 UWMP, total water supply demand for its service area in 2020 was 202,880 AFY.[10] While the number of EBMUD customers has increased steadily since 1970, the average daily water demand has not increased correspondingly; outside of droughts, demand remains relatively stable.[11] Several factors contributed to keeping the overall water demand from rising as might otherwise be anticipated, including EBMUD's water recycling and conservation programs, changes in customer usage patterns, and legislative changes.

DSRSD System and Service Area

DSRSD is responsible for preparing and implementing a UWMP. The DSRSD 2020 UWMP includes current and projected demand and water supply in five-year increments through the year 2045.[12] As discussed within the UWMP, the DSRSD system does not anticipate supply deficits in normal years, single-dry years, or five-year dry periods throughout 2045.[13] DSRSD anticipates growth in the next through 2035 that would increase its demand for water and is accounted for the UWMP. DSRSD's potable demand is expected to increase approximately 23 and 47 percent (from 2020 levels), respectively, by 2035 and then stay almost constant through 2045.[14]

DSRSD provides both potable water and recycled water to customers within its water service area. Potable water is water that is safe to drink and typically has had various levels of treatment and disinfection. Recycled water is municipal wastewater that has been treated to a specified quality to enable it to be used again. According to the DSRSD 2020 UWMP, total water supply demand for its service area in 2020 was 10,330 acre-feet per year (AFY) for the year 2020.[15]

General Plan Area

Water consumption patterns in the General Plan area is a function of many independent factors including growth, weather conditions, economic conditions, and water conservation efforts.

Water Infrastructure and Distribution

East Bay Municipal Utility District Service Area

The EBMUD water supply system consists of a network of reservoirs, aqueducts (pipelines), water treatment plants (WTPs), pumping plants, and other distribution facilities and pipelines that convey Mokelumne River water from Pardee Reservoir to EBMUD customers. EBMUD facilities and operations are heavily regulated by numerous local, State, and federal agencies. EBMUD captures snowmelt from 575 square miles of mostly undeveloped public and private watershed lands of the Mokelumne River and collects it at Pardee Reservoir, approximately 90 miles east of the Bay Area. The Mokelumne Aqueducts convey the Mokelumne River supply from Pardee Reservoir across the Sacramento-San Joaquin River Delta to local storage and treatment facilities in the East Bay. Local

[10] East Bay Municipal Utility District (EBMUD). 2020. Urban Water Management Plan. https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan. (accessed March 2023).
[11] East Bay Municipal Utility District (EBMUD). 2020. Urban Water Management Plan. https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan. (accessed March 2023).
[12] Dublin San Ramon Services District (DSRSD). 2021. Urban Water Management Plan. https://www.dsrsd.com/home/showpublisheddocument/7749/637607511715070000. (accessed March 2023).
[13] Dublin San Ramon Services District (DSRSD). 2021. Urban Water Management Plan. https://www.dsrsd.com/home/showpublisheddocument/7749/637607511715070000. (accessed March 2023).
[14] Dublin San Ramon Services District (DSRSD). 2021. Urban Water Management Plan. https://www.dsrsd.com/home/showpublisheddocument/7749/637607511715070000. (accessed March 2023).
[15] Dublin San Ramon Services District (DSRSD). 2021. Urban Water Management Plan. https://www.dsrsd.com/home/showpublisheddocument/7749/637607511715070000. (accessed March 2023).

runoff is stored in several East Bay reservoirs for treatment and delivery to customers and to assure emergency supplies are available locally.

DUBLIN SAN RAMON SERVICES DISTRICT SERVICE AREA

The California Aqueduct conveys water to Zone 7 water to Kern County to "bank" for future use. Currently, the conveyance system to Zone 7 is limited to the South Bay Aqueduct (SBA). DSRSD has a total of eight pressure zones. The main pressure zone, Zone 1, is supplied directly from the Zone 7 through several turnouts. There are three pressure zones (Zones 2, 3, and 4) in western Dublin, two pressure zones (Zones 20 and 30) in eastern Dublin, and two pressure zones (Zone 200 and 300) in the Dougherty Valley that are supplied from Zone 1 through booster stations. DSRSD's potable water distribution system currently contains approximately 337 miles of potable water pipelines.

GENERAL PLAN AREA

The General Plan area receives water through the EBMUD and DSRSD existing water distribution infrastructure systems, primarily via the Mokelumne and SBA Aqueducts. From there, it is distributed through a series of pump stations, storage tanks, pressure systems, and service connections.

Water Treatment

EAST BAY MUNICIPAL UTILITY DISTRICT SERVICE AREA

EBMUD has six water treatment plants (WTPs) located in the EBMUD service area. Three of the WTPs are conventional treatment plants that use rapid mixing, flocculation, sedimentation, filtration, and free chlorine disinfection to treat water. Two of these plants, Sobrante and Upper San Leandro, also have ozone and peroxide for taste and odor control. The three inline WTPs have a simpler treatment process consisting of coagulation, filtration, and disinfection. They do not have a sedimentation process and rely on a pristine, low-turbidity raw water source in Pardee Reservoir. All the WTPs meet and exceed California drinking water regulations.

DUBLIN SAN RAMON SERVICES DISTRICT SERVICE AREA

DSRSD and Zone 7 Water Agency (Zone 7) entered into the current contract for a Municipal and Industrial Water Supply on August 23, 1994. The contract has a 30-year term that expires in 2024 and is intended to ensure an equitable, reliable, and high-quality water service for DSRSD customers.[16] In February 2000, the contract was amended to expand the DSRSD service area to include the Dougherty Valley area and special provisions were added regarding supplying water to Dougherty Valley. Zone 7 operates two water treatment plants: the Del Valle Water Treatment Plant (DVWTP) and the Patterson Pass Water Treatment Plant (PPWTP). DSRSD is served by the DVWTP, which is located south of San Ramon and just south of Lake Del Valle. The DVWTP has an average capacity of 36 million gallons per day (MGD), although it is permitted to operate up to 40.9 MGD. The DVWTP can receive water either directly from the SBA or from Lake Del Valle. The treatment processes meets California Water Code standards and includes newly installed ozone disinfection, along with coagulation, flocculation, clarification, multi-media biofiltration, and chlorine for

[16] Dublin San Ramon Services District (DSRSD). 2021. Urban Water Management Plan. https://www.dsrsd.com/home/showpublisheddocument/7749/637607511715070000. (accessed March 2023).

backup/supplemental disinfection. In addition, chloramine is added to maintain a disinfectant residual in the transmission system.[17]

GENERAL PLAN AREA

No WTPs are located within the General Plan area. San Ramon receives water from the Sacramento San Joaquin Delta, Mokelumne Watershed, and water released from Lake Del Valle. All water derived from these sources is treated at either an EBMUD or DSRSD/Zone 7 WTP. Water for the DSRSD portion of General Plan area is treated at the DVWTP, which has an average capacity of 36 mgd.[18] Water for the EBMUD portion of the General Plan area is treated at the Walnut Creek WTP, which has a permitted capacity of 115 mgd.[19]

Wastewater

Wastewater Infrastructure, Collection, and Generation

CENTRAL CONTRA COSTA SANITARY DISTRICT SERVICE AREA

Wastewater produced from the Dougherty Valley area of San Ramon is conveyed north to Central Contra Costa Sanitary District's (Central San) wastewater treatment plant. Wastewater flows are transported via the San Ramon Interceptor located within the Iron Horse Trail corridor. Central San is responsible for the collection, treatment, and disposal of wastewater within the Central San service area. Central San provides roughly 487,300 customers and 3,000 businesses with sanitary sewer service over 147 square miles in the central Contra Costa area. Formed in 1946 as a Special District in Contra Costa County, California, Central San has 294 budgeted employees and operates a 1,500-mile network of collection system piping and a treatment plant that processes an average daily flow of 32 million gallons.

The Central San wastewater collection system includes 1,535 miles of <6- to 102-inch-diameter sewers and 30,887 manholes across its service area. The system includes 18 sewage-pumping stations. Existing sewer lines convey wastewater generated by land uses within the City of San Ramon to the Central San Treatment Plant for treatment and then disposal or reuse.[20] The Central San collection system master plan identifies facility improvements necessary to maintain collection service at or above this level.

Operation of the collection system is subject to the SWRCB's General Waste Discharge Requirement (Order No. 2006-0003) to reduce sanitary sewer overflows (SSOs) by requiring 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). Central San updated their SSMP in 2022 which seeks to provide a plan and schedule to properly manage, operate, and maintain all parts of the district's sanitary sewer system.[21] In addition to the SSMP, the

[17] Zone 7 Water Agency (Zone 7). 2021. 2020 Urban Water Management Plan. https://www.zone7water.com/sites/main/files/file-attachments/0_final_2020_uwmp.pdf?1624903044. (accessed April 2023).
[18] Zone 7 Water Agency (Zone 7). 2021. 2020 Urban Water Management Plan. https://www.zone7water.com/sites/main/files/file-attachments/0_final_2020_uwmp.pdf?1624903044. (accessed April 2023).
[19] East Bay Municipal Utility District (EBMUD). 2020. Urban Water Management Plan. https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan. (accessed April 2023).
[20] Central Contra Costa Sanitary District (Central San). 2022. Central San Treatment Plant. https://www.centralsan.org/treatment-plant. (accessed April 2023).
[21] CCCSD, Central Contra Costa Sanitary District. 2022. Central Contra Costa Sanitary District Sewer System Management Plan, Adopted October 6, 2022. https://www.centralsan.org/sites/main/files/file-attachments/2020_ssmp_approved_audit_06.05.2020.pdf?1620312805. (accessed April 2023).

Central San Treatment Master Plan identifies facility improvements necessary to maintain treatment service at or above the current level, which are prioritized and scheduled for implementation in an annually updated Capital Improvement Budget and 10-year Capital Improvement Program.

DUBLIN SAN RAMON SERVICES DISTRICT SERVICE AREA

The DSRSD wastewater service area includes the City of Dublin in Alameda County and the southern portion of the City of San Ramon in Contra Costa County (the northern portion of San Ramon and Dougherty Valley are located in the Central San wastewater service area). The existing wastewater service area encompasses approximately 13,340 acres, or 20.85 square miles. Within the wastewater service area there are currently 207 miles of gravity mains, one permanent lift station, and one temporary lift station. The permanent lift station has 26 feet of force main.[22] The flow from the wastewater collection service area is conveyed to the DSRSD WWTP, which is located in the City of Pleasanton. Wastewater effluent is discharged to the Livermore Amador Valley Water Management Agency (LAVWMA) effluent disposal facilities for conveyance and discharge to San Francisco Bay.

GENERAL PLAN AREA

Central San, which serves a majority of the City of San Ramon, owns and operates 18 pump stations and associated force mains. The collection system is sized for an average dry weather flow of up to 32 MGD and a peak wet weather flow of approximately 230 MGD. DSRSD, which serves the southern portion of San Ramon, owns and operates 207 miles of gravity mains, one permanent lift station, and one temporary lift station. DSRSD's wastewater treatment facilities have a capacity of approximately 17.0 mgd.

Wastewater Treatment

CENTRAL CONTRA COSTA SANITARY DISTRICT SERVICE AREA

Central San operates the Central San WWTP where wastewater is treated and then discharged into Suisun Bay. The Central San WWTP is located in an unincorporated area of Contra Costa County adjacent to the City of Martinez. The Central San WWTP has a treatment capacity of 54 million gpd and treats an average of 35.6 million gallons of wastewater per day.[23] On average, the WWTP processes approximately 32 million gallons of wastewater each day during the dry season and can see peak flows as high as an estimated 230 million gallons per day during an extreme winter storm.[24] Approximately 600 million gallons per year are treated to a tertiary level through additional filtration and disinfection before being distributed as recycled water for landscape irrigation, industrial processes, and plant operations.

DUBLIN SAN RAMON SERVICES DISTRICT SERVICE AREA

DSRSD operates the DSRSD WWTP, where wastewater is treated and then discharged into San Francisco Bay. The DSRSD WWTP is located approximately one mile south of the DSRSD wastewater

[22] Dublin San Ramon Services District (DSRSD). 2020. 2017 Wastewater Collection System Master Plan. https://www.dsrsd.com/home/showpublisheddocument/7233/637620238955100000. (accessed April 2023).
[23] Central Contra Costa Sanitary District (Central San). 2022. Central San Treatment Plant. https://www.centralsan.org/treatment-plant. (accessed April 2023).
[24] Central Contra Costa Sanitary District (Central San). 2017. Comprehensive Wastewater Master Plan Executive Summary. https://www.centralsan.org/sites/main/files/file-attachments/cwmp_executive_summary.pdf?1510867154. (accessed March 2023).

collection service area. The DSRSD WWTP has a capacity of approximately 17.0 mgd, and the current average dry weather flow is approximately 9.7 mgd. The WWTP includes primary, secondary, and tertiary treatment processes using microfiltration or sand filtration and ultraviolet disinfection. The District also has a recycled water program that provides treated effluent for irrigation purposes in Dublin and Dougherty Valley, as well as to the City of Pleasanton.[25]

GENERAL PLAN AREA

Wastewater generated in the General Plan area is conveyed to the Central San and DSRSD WWTPs where it is treated and then discharged into Suisun Bay and San Francisco Bay, respectively.

Stormwater

Stormwater Infrastructure and Collection

CONTRA COSTA COUNTY PUBLIC WORKS SERVICE AREA

San Ramon is located within the Contra Costa County Public Works stormwater service area. The Contra Costa County Flood Control and Water Conservation District guides regional drainage plans throughout incorporated and unincorporated County areas. All stormwater drains into Suisun Bay via stormwater drainage systems and regional creeks and streams. The County Watershed Program is responsible for ensuring that the County complies with its municipal stormwater NPDES permits in unincorporated County land only.[26] The Contra Costa Clean Water Program (CCCWP) is responsible for ensuring that the County and incorporated cities comply with its municipal stormwater NPDES permits. Contra Costa County Public Works owns and maintains unincorporated County drainage facilities. Incorporated cities within the service area of the Contra Costa County Public Works, such as San Ramon, maintain drainage facilities within the municipality city limits.[27]

The CCCWP offers education and outreach to residents and businesses throughout the County to help them reduce stormwater pollution. In addition, the CCCWP provides Best Management Practice (BMP) information and pollution prevention for municipal operations, new and redevelopment planning, industrial/commercial site controls, water quality monitoring, pesticide toxicity controls, trash reduction in creeks and land, mercury and Polychlorinated Biphenyl (PCB) controls, and other stormwater related compliance and enforcement activities through education and outreach to the public.[28]

GENERAL PLAN AREA

San Ramon is primarily within the CCCWP South County Watersheds Planning Unit, which includes the cities of Moraga, San Ramon, in addition to a small southern portion of Orinda and the eastern portion of Danville. This Planning Unit includes watersheds that do not drain directly from the County to the San Francisco Bay, including Upper Alameda Creek that flows south into Alameda County and Upper San Leandro and Moraga Creeks that flow into Upper San Leandro Reservoir,

[25] Dublin San Ramon Services District (DSRSD). 2020. 2017 Wastewater Collection System Master Plan. https://www.dsrsd.com/home/showpublisheddocument/7233/637620238955100000. (accessed April 2023).
[26] Contra Costa County Flood Control District. 2019. http://www.cccounty.us/5586/Flood-Control. (accessed April 2023).
[27] Contra Costa County Flood Control and Water Conservation District. Drainage, Watershed, and Water Quality FAQs, page 5.
[28] Contra Costa Clean Water Program (CCCWP). 2022, Program Activities. https://www.cccleanwater.org/about/program-activities. (accessed April 2023).

which in turn outlets south of the Alameda County Line.[29] Ultimately, the creeks of the CCCWP South County Planning Unit indirectly discharge to the San Francisco Bay. Stormwater runoff within the City of San Ramon is collected and disposed of by an integrated system of storm drains, inlets, curbside gutters, catch basins, drainage ditches, and man-made channels.

Telecommunications

Telecommunication services include telephone service (both landlines and mobile service) and internet service for businesses and homes.

Telecommunications Demand

SAN RAMON (GENERAL PLAN AREA)

San Ramon telecommunications demand is met by Xfinity and AT&T within the General Plan area.

Telecommunications Infrastructure and Distribution

SAN RAMON (GENERAL PLAN AREA)

Telecommunications infrastructure within San Ramon includes underground optical fibers, cell towers, and standard phone equipment and internet routers. Telecommunications providers own and operate infrastructure, such as cellphone towers and fiber optic cables, within the San Ramon Planning Area (the Genera Plan area).

Solid Waste

Solid Waste Collection

ALAMEDA COUNTY INDUSTRIES OF SAN RAMON SERVICE AREA

Alameda County Industries (ACI) of San Ramon provides residential and commercial solid waste, organics, and recycling collection services. In addition to collection services, ACI provides free waste audits, information for tenants, and indoor recycling receptacles for customers.

GENERAL PLAN AREA

ACI provides residential and commercial solid waste and recycling collection services for the San Ramon Planning Area (i.e., the General Plan area). San Ramon's solid waste is processed at the Republic Services Contra Costa Transfer Station at 951 Waterbird Way in Martinez. Solid waste is then transported Vasco Road Sanitary and Altamont Landfills, both located in the City of Livermore.

Solid Waste Disposal

ALAMEDA COUNTY INDUSTRIES OF SAN RAMON SERVICE AREA

San Ramon's solid waste is processed at the Davis Street Resource Recovery Complex and Transfer Station in San Leandro, and from there is transported primarily to the Vasco Road Landfill in and Altamont Landfill both located in Livermore. According to the California Department of Resources Recycling and Recovery (CalRecycle), the Vasco Road Landfill has a remaining capacity of

[29] Contra Costa Clean Water Program (CCCWP). 2019. Contra Costa Watersheds Stormwater Resource Plan. https://www.cccleanwater.org/userfiles/kcfinder/files/CCW%20SWRP%20Main%20%2B%20App%20A.pdf. (accessed April 2023).

approximately 7,379,000 cubic yards.[30] The Altamont Landfill has a remaining capacity of 65,400,000 cubic yards. [31] Table 3.13-1 shows the estimated permitted and remaining capacity and current status of the Vasco and Altamont Landfills.[32]

Table 3.13-1 Estimated Landfill Capacity and Closure Date

Landfill Facility	Permitted Capacity (cubic yards)	Remaining Capacity (cubic yards)	Status
Vasco Road Sanitary Landfill [33]	32,9700,000	7,379,000	Active
Altamont Landfill & Resource Recovery[34]	124,400,000	65,400,000	Active

Source: Cal Recycle

Municipal solid waste comes from primarily the Bay Area region, but also from more distant municipalities and cities. CalRecycle reports that in 2019 a total of 42,110 tons of solid waste from San Ramon was disposed at 24 different landfills.[35]

GENERAL PLAN AREA

ACI provides residential and commercial solid waste and recycling collection services for the General Plan area. Over 58 percent (24,446 tons) of San Ramon's solid waste generated in 2019 went to the Vasco Road Landfill.[36]

3.13.3 Regulatory Framework

Federal Regulations

Clean Water Act

The federal Clean Water Act, enacted by Congress in 1972 and amended several times since, is the primary federal law regulating water quality in the United States and forms the basis for several State and local laws throughout the country. The Act established the basic structure for regulating discharges of pollutants into the waters of the United States. The Clean Water Act gave the U.S. Environmental Protection Agency the authority to implement federal pollution control programs, such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry contaminants in surface water, establishing wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling nonpoint-source pollution. At the federal level, the Clean Water Act is administered by the U.S. Environmental Protection Agency and U.S. Army Corps of Engineers. At the State and

[30] CalRecycle. 2019 SWIS Facility/Site Activity Details Acme Landfill (07-AA-0002). https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4396?siteID=217. (accessed March 2023).
[31] CalRecycle. 2019 SWIS Facility/Site Activity Details Altamont Landfill & Resource Recovery (01-AA-0009). https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/7?siteID=7. (accessed March 2023).
[32] CalRecycle. 2019 SWIS Facility/Site Activity Details Keller Canyon Landfill (07-AA-0032). https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4407?siteID=228. (accessed March 2023).
[33] CalRecycle. 2019 SWIS Facility/Site Activity Details Vasco Road Sanitary Landfill (01-AA-0010). https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/9?siteID=8. (accessed March 2023).
[34] CalRecycle. 2019 SWIS Facility/Site Activity Details Altamont Landfill & Resource Recovery (01-AA-0009). https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/7?siteID=7. (accessed March 2023).
[35] CalRecycle. 2019. Jurisdiction Disposal and Alternative Daily Cover (ADC) Tons by Facility. https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility. (accessed March 2023).
[36] CalRecycle. 2020. Jurisdiction Disposal and Alternative Daily Cover (ADC) Tons by Facility. https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility. (accessed April 2023).

regional levels in California, the act is administered and enforced by the SWRCB and the nine Regional Water Quality Control Boards (RWQCBs).

Clean Water Act Section 402

Section 402 of the Clean Water Act requires that all construction sites on an acre or greater of land, as well as municipal, industrial and commercial facilities discharging wastewater or stormwater directly from a point source, such as a pipe, ditch, or channel, into a surface water of the United States must obtain permission under the NPDES permit. All NPDES permits are written to ensure that the surface water receiving discharges will achieve specified water quality standards.

National Pollutant Discharge Elimination System

The NPDES permit program was established in 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.

Title 40 of the Code of Federal Regulations

Title 40 of the Code of Federal Regulations (CFR), 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. The federal regulations address the location, operation, design, groundwater monitoring, and closure of landfills.

State Regulations

California Sustainable Groundwater Management Act

In September 2014, Governor Brown signed legislation requiring that California's critical groundwater resources be sustainably managed by local agencies. The Sustainable Groundwater Management Act gives local agencies the power to sustainably manage groundwater and requires groundwater sustainability plans to be developed for medium- and high-priority groundwater basins.

California Senate Bills 610 and 221 (Water Supply Assessment and Verification)

Senate Bills (SB) 610 and 221 amended State law, effective January 1, 2002, to improve the link between the information on water supply availability and certain land use decisions made by cities and counties. Both statutes require detailed information regarding water availability to be provided to city and county decision-makers prior to approval of specified large development projects with greater than 500 dwelling units or 500,000 square feet of commercial space. Both statutes also require this detailed information to be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects. Under SB 610 water

assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects as defined in Water Code 10912 subject to CEQA. Under SB 221 approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply.

California Water Plan

The California Department of Water Resources is responsible for preparing and updating the California Water Plan, which is a policy document that guides the development and management of State water resources. The plan is updated every five years to reflect changes in resources and urban, agricultural, and environmental water demands. The California Water Plan suggests ways of managing demand and augmenting supply to balance water supply with demand.

California Urban Water Management Planning Act

In 1983 the California Legislature enacted the Urban Water Management Planning Act (Water Code Section 10610–10656). The Act states that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 acre-feet annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The Act requires that urban water suppliers adopt an urban water management plan at least once every five years and submit them to the Department of Water Resources. Noncompliant urban water suppliers are ineligible to receive funding pursuant to Division 24, commencing with Section 78500, or Division 26, commencing with Section 79000, or receive drought assistance from the State until the UWMP is submitted and deemed complete pursuant to the Urban Water Management Planning Act.

California Senate Bill 7x7 (Statewide Water Conservation)

In November 2009 the California State Legislature passed and the Governor approved a comprehensive package of water legislation, including SB 7x7 addressing water conservation. In general SB 7x7 requires a 20 percent reduction in per capita urban water use by 2020, with an interim 10 percent target in 2015. The legislation requires urban water users to develop consistent water use targets and to use those targets in their UWMPs.

Porter-Cologne Water Quality Control Act (California Water Code)

The State of California is authorized to administer Federal or State laws regulating water pollution within the State. The Porter-Cologne Water Quality Control Act (Water Code Section 13000, *et seq*.) includes provisions to address requirements of the Clean Water Act. These provisions include National Pollutant Discharge Elimination System (NPDES) permitting, dredge and fill programs, and civil and administrative penalties. The Porter-Cologne Act is broad in scope and addresses issues relating to the conservation, control, and utilization of the water resources of the State. Additionally, the Porter-Cologne Act states that the quality of all the waters of the State, including groundwater and surface water, must be protected for the use and enjoyment by the people of the State.

In California, the NPDES program is administered by the SWRCB through the Regional Water Quality Control Boards (RWQCB) and requires municipalities to obtain permits that outline programs and activities to control wastewater and stormwater pollution. The federal Clean Water Act prohibits discharges of stormwater from construction projects unless the discharge is in compliance with an NPDES permit. The SWRCB is the permitting authority in California, and adopted an NPDES General

Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, otherwise known as the Construction General Permit (Order 2009-0009, as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The Order applies to construction sites that include one or more acre of soil disturbance. Construction activities include clearing, grading, grubbing, excavation, stockpiling, and reconstruction of existing facilities involving removal or replacement. The Construction General Permit requires that the landowner and/or contractor file permit registration documents prior to commencing construction and then pay a fee annually through the duration of construction. These documents include a notice of intent, risk assessment, site map, stormwater pollution prevention plan (SWPPP), and signed certification statement. The SWPPP must include measures to ensure that: all pollutants and their sources are controlled; non-stormwater discharges are identified and eliminated, controlled, or treated; site Best Management Practices (BMPs) are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges; and BMPs installed to reduce or eliminate pollutants after construction are completed and maintained. The Construction General Permit specifies minimum BMP requirements for stormwater control based on the risk level of the site. The Permit also specifies minimum qualifications for a qualified SWPPP developer and qualified SWPPP practitioner.

State Water Resources Control Board General Waste Discharge Requirement

The SWRCB adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than 1 mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows (SSOs) 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. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system.

The SWRCB has delegated authority to nine Regional Water Quality Control Boards (RWQCB) to enforce these requirements within their region. NPDES permits allow the RWQCB to regulate where and how the waste is disposed, including the discharge volume and effluent limits of the waste and the monitoring and reporting responsibilities of the discharger. The San Francisco Bay RWQCB issues and enforces NPDES permits in San Ramon.

California Assembly Bill 939

AB 939 (Public Resources Code 41780) requires cities and counties to prepare integrated waste management plans 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 integrated waste management plans. These elements are designed to develop recycling services to achieve diversion goals, stimulate local recycling in manufacturing and stimulate the purchase of recycled products.

California 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. AB 341 required all businesses that generate four or more cubic yards of garbage per week and multi-family dwellings with five or more units to recycle by July 1, 2012. AB341 also sets a statewide goal of 75 percent waste diversion.

California Senate Bill 1016

SB 1016 requires that the 50 percent solid waste diversion requirement established by AB 939 be expressed in pounds per person per day. SB 1016 changed the CalRecycle review process for each municipality's integrated waste management plan. After an initial determination of diversion requirements in 2006 and establishing diversion rates for subsequent calendar years, the Board reviews a jurisdiction's diversion rate compliance in accordance with a specified schedule. Beginning January 1, 2018, the Board will be required to review a jurisdiction's source reduction and recycling element and hazardous waste element once every two years.

California Senate Bill 1383

SB 1383 was adopted in September 2016 and establishes targets to achieve a 75 percent reduction in the level of Statewide landfilled organic waste from the 2014 level 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. In addition, SB 1383 regulations require that jurisdictions conduct education and outreach on organics recycling to all residents, businesses, haulers, solid waste facilities, and local food banks and other food recovery organizations.

Regional and Local Regulations

EBMUD 2020 Urban Water Management Plan

The EBMUD UWMP 2020 is an update of the UWMP 2015. It is designed to satisfy the requirements of the Urban Water Management Planning Act and provide the public with a supply and demand report on EBMUD's progress in implementing conservation and water recycling programs, including efforts to secure supplemental water supply sources. The UWMP 2020 also contains data on EBMUD's compliance with SB X7-7, the state law mandating that urban water agencies reduce water use in order to achieve a statewide reduction of 20 percent by 2020. EBMUD prepared the UWMP 2020 to comply with all current applicable regulations and statutes. In adopting its UWMP, EBMUD commits to managing water demand efficiently using its water supplies to protect both its customers and its water and natural resources, and making every effort to ensure the appropriate level of water service reliability is met given varied water demands during normal, dry, and multiple dry years.

DSRSD 2020 Urban Water Management Plan

The DSRSD 2020 UWMP is an update to the 2015 UWMP adopted by the District's Board of Directors and is prepared in compliance with the California Urban Water Management Planning Act. The UWMP includes the District's planning activities to ensure adequate water supplies to meet existing and future demands for water. The 2020 UWMP presents information on the District's supply and demand forecasts, conservation programs, water demand management measures, and recycled water opportunities through the year 2045. The 2020 UWMP addresses the requirements of the Water Conservation Bill of 2009, SB X7-7, demonstrating compliance with the 2020 per capita water use target reduction, as well as more recent legislation, AB 1668 and SB 606, with inclusion of a Drought Risk Assessment and Water Shortage Contingency Plan. The UWMP also includes a description of the plan adoption, public coordination, and planning coordination activities.

San Francisco Bay Region Municipal Stormwater Permitting Program

The San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049 (MRP) issues the Waste Discharge Requirements and NPDES Permit for the discharge of stormwater runoff from the municipal separate storm sewer systems (MS4s) of over 70 municipalities, including San Ramon, and local agencies in five Bay Area counties[37]. Under the MRP, permittees are prohibited from non-stormwater discharges into storm drain systems and watercourses. Permitted discharges must not cause or contribute to a violation of any applicable water quality standard for receiving waters. Upon a determination by either the MRP permittee(s) or the RWQCB that discharges are causing or contributing to an exceedance of an applicable water quality standards, the permittee(s) must notify, within no more than 30 days, and thereafter submit a report to the RWQCB. The report must describe controls or best management practices (BMPs) that are currently being implemented, and the current level of implementation, and additional controls or BMPs that will be implemented, and/or an increased level of implementation, to prevent or reduce the discharge of pollutants that are causing or contributing to the exceedance of water quality standards. The MRP also sets forth requirements for monitoring water quality.

Provision C.3 of the MRP establishes discharge requirements for new development and redevelopment projects. The goal of Provision C.3 is for the MRP permittees to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. According to the MRP, this goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.

Contra Costa Clean Water Program

The CCCWP includes 21 local government agencies who each own and operate a Municipal Separate Storm Sewer System (MS4). The primary goal of CCCWP is to reduce the pollution carried by stormwater throughout Contra Costa County into creeks, wetlands, and the Bay/Delta. CCCWP is responsible for maintaining compliance with the NPDES Stormwater Discharge Permit within the County and works to promote stormwater pollution prevention.

San Ramon General Plan

The current San Ramon General Plan contains policies related to utilities and service systems, but they would be replaced by the proposed 2040 General Plan.

San Ramon Village Specific Plan

The Utilities Element of the San Ramon Village Specific Plan establishes policies for the orderly upgrading and construction of utilities, taking into account the long-term development objectives for the planning area. The utility plan provides individual property owners and developers as well as the City with an overall framework of improvements that will be necessary to support the full buildout of the Specific Plan area.

[37] SWRCB. 2015. San Francisco Bay Region Municipal Regional Stormwater NPDES Permit. https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/Municipal/R2_2015_0049_amended.pdf. (accessed March 2023).

San Ramon Municipal Code

The City of San Ramon Municipal Code contains all ordinances for the City of San Ramon. The Municipal Code is organized by Title, Division, Chapter, and Section. The current Municipal Code is up to date through Ordinance 516, passed October 25, 2022. Provisions of Division C1 (Uniform Codes), Division C4 (Land Development), and Division C6 (Public Works and Flood Control), of the Municipal Code helps incorporate the 2022 California Building Code, regulate land development and site improvements, and enforce drainage and flood control measures within San Ramon.

3.13.4 Impacts and Mitigation Measures

Significance Criteria

The City of San Ramon utilizes the following 2022 CEQA Guidelines Appendix G significance criteria questions related to Utilities and Service Systems.

Would the 2040 General Plan:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
b) Have insufficient 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 management and reduction statutes and regulations related to solid waste?

Approach to Analysis

Environmental impacts to utilities and service systems have been assessed using impact significance criteria from federal, State, and local regulations. The impact analysis is based on available literature regarding the existing plans, policies, and resources in the General Plan area. Criteria used during this analysis are described below:

Water

The water supply analysis in this section is based on information included in the Urban Water Management Plans (UWMPs) for each of the aforementioned districts. The availability of data from UWMPs is complex for the proposed plan, because the City of San Ramon is served by multiple water supply providers and the respective UWMP boundaries do not align with the boundaries of the General Plan area. In addition, both of San Ramon's water suppliers have used different types of assumptions to make water demand estimates for their service territories. Therefore, an "apples to apples" comparison of water use and forecasted water demand in each service territory is not possible based on available published data. Therefore, in order to characterize water supply availability using the most reliable available information, this analysis relies upon data provided in the EBMUD UWMP and the DSRSD UWMP. These two UWMPs provide detailed system description,

system demands (including cumulative growth assumptions), water reduction planning, system supplies, water quality information, groundwater information, water supply reliability information, water shortage contingency planning, demand management measures, as well as information on climate change.

Wastewater

Wastewater production was calculated and compared with treatment capacity to determine whether wastewater treatment requirements would be exceeded. Wastewater discharge permitting requirements were also reviewed.

Stormwater

Stormwater production was calculated and compared with City of San Ramon stormwater facility treatment capacity to determine whether stormwater collection requirements would be exceeded.

Solid Waste

Solid waste production was calculated and compared with the applicable landfill capacity to determine whether landfill daily permitted capacity and total storage capacity would be exceeded. San Ramon's solid waste regulations and policies were also reviewed.

Telecommunications

The telecommunications providers in San Ramon were identified and ability to provide service verified.

See Section 3.6, *Greenhouse Gas Emissions and Energy*, for discussions related to electricity and natural gas.

EIR Scoping Comments Consideration

EBMUD provided comments during the NOP scoping period in regard to compliance with Senate Bill 7 for multi-unit structures, water service estimates for individual projects, compliance with EBMUD policy 9.05, and the incorporation of water conservation measures for individual projects. These comments are addressed below under Impacts UTL-1 and UTL-2.

Specific Thresholds of Significance

For purposes of this analysis, the following thresholds are used to evaluate the significance of utilities and service systems impacts resulting from implementation of the proposed plan.

- Create a need for relocated, new, or expanded water supply, wastewater treatment, stormwater drainage facilities, or telecommunications facilities, the construction of which would result in significant construction-related transportation, air quality, GHG emissions, energy, or noise impacts. If new or altered facilities are proposed or determined to be needed, then determination of significance of construction-related transportation, air quality, GHG emissions, energy, or noise impacts is based on the respective specific thresholds of significance listed in Section 3.12, *Transportation*; Section 3.2, *Air Quality*; Section 3.6, *Greenhouse Gas Emissions and Energy*; and Section 3.10, *Noise*.
- Result in insufficient water supply to serve the proposed plan's potable water demand during normal, dry, and multiple dry years.

- Inadequate capacity at the Central San facility to serve the proposed plan's wastewater generation
- Insufficient daily capacity or permitted daily capacity at the Vasco Road Landfill and Altamont Landfill to serve waste generation of the proposed plan.
- Unable to comply with AB 939 solid waste diversion goals.

Impact Evaluation

Need for Water, Wastewater, Stormwater, and Telecommunication Facilities

Significance Criterion a: Would the proposed plan require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Impact UTL-1 DEVELOPMENT UNDER THE 2040 GENERAL PLAN WOULD INCREASE DEMAND FOR WATER, WASTEWATER, STORMWATER, AND TELECOMMUNICATIONS SERVICES. UTILITY FACILITIES AND INFRASTRUCTURE DEVELOPMENT AND RELOCATION FACILITATED BY THE PROPOSED PLAN WOULD OCCUR IN DEVELOPED AREAS OF SAN RAMON WHERE SUCH FACILITIES EXIST, IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Construction

No new or expanded water, wastewater, stormwater, or telecommunications facilities are specifically proposed as part of the 2040 General Plan. However, the 2040 General Plan would provide the framework for development of up to 10,155 net new residential units in the San Ramon Planning Area (i.e., General Plan area). As a result, EBMUD, DSRSD, Central San, and local telecommunications providers could need to increase their water supply, wastewater, stormwater, and telecommunications services to San Ramon through the year 2040, which could in turn require the construction of new or expanded facilities to accommodate additional utility supply and collection. If construction or expansion of future facilities are needed, separate environmental review would be required, which could result in development and implementation of future project-specific construction-related mitigation measures. In addition, the 2040 General Plan Public Facilities and Utilities Element contains the following policies related to utility construction:

Policy 7.4-I-10 Develop procedures and regulations to ensure minimal impacts to the community from the installation of utilities on City streets.

Policy 7.4-I-12 Coordinate sub-surface utility work with road improvements and maintenance and enforce the City's pavement cut moratorium whenever possible.

The 2040 General Plan facilitates development within areas of San Ramon that are currently developed. As such, construction of new utility infrastructure or facilities, if required, would likely occur on property previously disturbed or developed and thus within the programmatic analysis for buildout under the 2040 General Plan as analyzed throughout this EIR. Additionally, construction would be required to comply with all applicable federal, State, and local regulations governing the provision of utility infrastructure and utilities. This would reduce the potential for adverse construction impacts associated with construction of new or expanded utility and infrastructure and facilities associated with implementation of the 2040 General Plan. However less-than-significant-

with-mitigation construction impacts associated with criteria air pollutants and toxic air contaminants, birds and bats, historic, archaeological, and tribal cultural resources, paleontological resources, wildfire risk, stationary noise and vibration, and traffic management were determined in Sections 3.2, *Air Quality,* 3.3, *Biological Resources,* 3.4, *Cultural and Tribal Cultural Resources*, 3.5, *Geology, Soils, and Mineral Resources,* 3.7, *Hazards, Hazardous Materials, and Wildfire*, 3.10, *Noise,* and 3.12, *Transportation*, respectively. Therefore, construction impacts related to potential need for new or expanded wastewater utility infrastructure and facilities would be considered less than significant with mitigation.

Operation

WATER

The UWMPs for both EBMUD and DSRSD determined that there are sufficient water supplies to accommodate the anticipated population growth throughout their respective service areas according to ABAG Plan Bay Area 2040 projections. In addition, the General Plan area is located in urbanized parts of both the EBMUD and DSRSD service areas. As discussed under Impact UTIL-2, there would be sufficient water supplies available to serve the 2040 General Plan and reasonably foreseeable future development during normal, dry, and multiple dry years. In compliance with the California Fire Code, Part 9 of the California Building Standards Code (CBC), development facilitated under both plans would follow standards for fire safety such as fire flow requirements for buildings, fire hydrant location, and distribution criteria. The 2040 General Plan update would require a review by EBMUD and DSRSD to determine if modifications or additional improvements to their systems are necessary to support development in the proposed plan. With implementation of the above policies, sufficient water supply and WTP capacity would be maintained. As such, new or expanded water facilities are not anticipated to be required due to operational demand.

In addition, the 2040 General Plan contains the following Open Space and Conservation Element and Safety Element goals and policies that would ensure conservation measures are implemented in order to maintain adequate water supply utility capacity and infrastructure:

OPEN SPACE AND CONSERVATION ELEMENT

Guiding Policy 8.6-G-1: Promote the implementation of water quality and conservation programs and measures by San Ramon employers, residents, and public agencies.

Policy 8.6-I-1 Require new development projects to implement indoor water conservation and demand management measures consistent with building code standards and Climate Action Plan policies.

Policy 8.6-I-2 Require new development projects to implement outdoor water conservation and demand management measures.

Policy 8.6-I-3 New development in areas where recycled water service exists or is planned shall be plumbed with “purple pipe” and other measures necessary to accommodate non-potable water service.

Policy 8.6-I-4 Require new development to meet the State Model Water Efficient Landscape Ordinance (MWELO).

Policy 8.6-I-5 Collaborate with DERWA (Dublin San Ramon Services District and East Bay Municipal Utilities District Recycled Water Authorities) to expand the recycled water distribution system in an efficient and timely manner.

Policy 8.6-I-7 Promote the protection of groundwater resources by collaborating with agencies that monitor and oversee clean-up efforts at existing sources of pollution.

SAFETY ELEMENT

Guiding Policy 9.6-G-1: Build a community that is resilient against the effects of climate change and protects all City residents, including the most vulnerable residents.

Policy 9.6-I-1 Identify appropriate public facilities to be designated as Resilience Hubs by providing resources such as cooling, power, or water which may not be accessible to all of the population in San Ramon during events of extreme heat, drought, flooding, or other natural disasters.

Policy 9.6-I-6 Prioritize regional solutions with public and private partners, including EBMUD and DSRSD, to diversify the City's water supply through utilizing alternative sources, including recycled water.

However, even with implementation of the aforementioned policies, there could be potential need for future water pipeline upsizing and infrastructure connections. As such, Mitigation Measure UTL-1 is recommended to reduce impacts to water supply and treatment to ensure adequate waste provision for current and future development. Impacts related to potential need for additional or expanded water treatment facilities are discussed further under Impact UTL-3, below. Since less-than-significant-with mitigation, operational impacts associated with criteria air pollutants, greenhouse gases and energy efficiency, mobile noise, and operational VMT were determined in Sections 3.2, *Air Quality,* 3.6, *Greenhouse Gas Emissions and Energy*, 3.10, *Noise*, and 3.12, *Transportation,* respectively, operational impacts related to potential need for new or expanded wastewater utility infrastructure and facilities would be considered less than significant with mitigation.

WASTEWATER

Implementation of the proposed plan could have a significant impact if the wastewater treatment provider would not have sufficient capacity to serve the proposed new land uses in addition to the provider's existing commitments.

Growth and development facilitated by the 2040 General Plan would create additional demand for wastewater treatment in San Ramon. However, development facilitated by the 2040 General Plan would occur within the urbanized areas of the city where existing wastewater infrastructure is present. Similar to water infrastructure, increased density could require upgraded wastewater pipelines or pumps. Development facilitated by the General Plan is projected to result in approximately 10,155 net new residential units in San Ramon that in turn would result in approximately 26,269 new residents by the year 2040. As discussed under Impact UTIL-3, there would be adequate capacity to serve the 2040 General Plan's wastewater demand. Development facilitated under the 2040 General Plan would undergo review by Central San and DSRSD to ensure that development does not encroach on easements for sewer pipes, and applicants would be responsible for the payment of standard sewer connection fees, as necessary.

However, there could be potential need for future wastewater pipeline upsizing and infrastructure connections. As such, Mitigation Measure UTL-2 is recommended to reduce impacts to wastewater infrastructure and treatment to ensure adequate wastewater services for current and future development. Since less-than-significant-with mitigation operational impacts associated with greenhouse gases, energy, and noise were determined in Sections 3.4, *Cultural and Tribal Cultural Resources*, 3.6, *Greenhouse Gas Emissions and Energy*, and 3.10, *Noise*, respectively, operational impacts related to potential need for new or expanded wastewater utility infrastructure and facilities would be considered less than significant with mitigation.

STORMWATER

As described in Impact HYD-1 in Section 3.8, *Hydrology and Water Quality*, development facilitated by the 2040 General Plan would reduce the extent of impervious surfaces within the General Plan area, which could in turn reduce stormwater runoff that enters San Ramon's municipal storm drain system. In addition, because the 2040 General Plan is focused on infill development, the conversion of open space and permeable surfaces to impervious surfaces would be minimized. Furthermore, the amount of impervious surfaces would be reduced through implementation of Best Management Practices, including Low Impact Development (LID) approaches, aimed at reducing stormwater runoff to ensure downstream storm drain capacity is not exceeded. Therefore, stormwater generated by development facilitated by the proposed plan would not exceed the capacity of existing or planned stormwater drainage and storage systems.

In addition, the 2040 General Plan Safety Element and Open Space and Conservation Element contain the following guiding policies and implementing policies that would ensure adequate stormwater capacity and infrastructure:

SAFETY ELEMENT

Guiding Policy 9.4-G-1: Protect the community from risks to lives and property posed by flooding and stormwater runoff.

Policy 9.4-I-4 Require new development to provide a funding mechanism for ongoing maintenance of drainage facilities and other stormwater control measures. Maintenance may be by the City under contract, or by a private entity.

Policy 9.4-I-8 All new developments shall not increase runoff to the 100-year peak flow in the City's flood control channels or to local creeks and shall be substantially equal to pre-development conditions. All new storm water systems shall be in compliance with the requirements of the City's Stormwater Municipal Regional Permit issued by the San Francisco Regional Water Quality Control Board.

OPEN SPACE AND CONSERVATION ELEMENT

Goal 8.3-G-2 Strengthen the City's partnership with East Bay Regional Parks District, Contra Costa County, other jurisdictions and private organizations to expand the ridgeline and hillside open space system in the city.

Policy 8.3-I-11 Continue participation in the Contra Costa Clean Water Program to control stormwater pollution and protect the quality of the City's waterways.

Goal 8.6-G-1 Promote the implementation of water quality and conservation programs and measures by San Ramon employers, residents, and public agencies.

Policy 8.6-I-6 Continue implementation of the City of San Ramon Stormwater Management Program to reduce storm water pollution, provide public education, and to protect the water quality of the City's local creeks and streams. Promote the reduction of storm water pollution through the construction and maintenance of joint treatment facilities and other partnerships between the City and private property owners.

With implementation of the policies mentioned above and LID techniques, sufficient stormwater collection would be maintained. As such, new or expanded facilities are not anticipated to be required due to operational demand. Therefore, 2040 General Plan operational impacts related to adequacy, capacity, and need for new stormwater infrastructure facilities as a result of stormwater generation would be less than significant.

TELECOMMUNICATIONS

At operation, the 2040 General Plan would increase demand for internet and telephone services provided by local telecommunications providers. The library, park district, and future residents would coordinate with telecommunication providers to provide service. The plan area is located in an urbanized area of San Ramon where existing telecommunications providers already offer internet and telephone services. As such, at operation the proposed plan would not require the relocation or expansion of telecommunications infrastructure, due to local telecommunications providers continuing to provide adequate telecommunications capacity and access.

In addition, the 2040 General Plan Public Facilities and Utilities Element contains the following goal and policies that would ensure adequate telecommunication capacity and infrastructure:

PUBLIC FACILITIES AND UTILITIES ELEMENT

Goal 7.4-G-1 Ensure the provision of adequate utility systems and communication for existing and future residents and the business community.

Policy 7.4-I-6 Continue to monitor cable video and encourage competition to ensure the highest quality service consistent with Federal Communications Commission guidelines).

Policy 7.4-I-7 Encourage utility providers to foster better access, use, and distribution of multi-media products, including fiber optics, wireless technologies, and satellite communications.

Policy 7.4-I-8 Encourage all new development to provide the technology to support multiple telecommunications facilities and providers.

Policy 7.4-I-9 Continue to review and update, as necessary, the regulations for wireless telecommunication facilities to ensure minimal impacts to the community.

Policy 7.4-I-11 Encourage co-location of telecommunication facilities to minimize potential visual impacts to the community.

With implementation of the policies mentioned above, sufficient telecommunications access would be maintained. As such, new or expanded facilities are not anticipated to be required due to

operational demand. Therefore, 2040 General Plan operational impacts related to access, capacity, and need for new telecommunications infrastructure facilities as a result of telecommunications demand would be less than significant.

Mitigation Measures

MITIGATION MEASURE UTL-1: PROVIDE ADEQUATE WATER SUPPLY AND TREATMENT FOR PROJECTS

To ensure adequate water supply, as well as consistency with existing utility providers and State regulations, the City shall implement the following measures:

- **Infrastructure Maintenance.** Collaborate with water providers in their efforts to maintain wastewater conveyance, treatment, and disposal infrastructure in good working conditions within San Ramon.
- **Water Services Requirement.** Require that water services for new developments do not negatively affect service to existing uses.
- **Water Provider Coordination.** Coordinate with water providers to ensure that new proposed development can be adequately served by the water supply system prior to approving the development.
- **Commercial and Business Water Conservation.** Require new or remodeled commercial and industrial development to make changes that conserve water, to the extent feasible. This could include utilizing efficient plumbing fixtures, installing drought-tolerant and water-wise landscaping, and harvesting rainwater for irrigation.
- **Water Conservation Measures.** Reduce the amount of water used by development by requiring compliance with adopted water conservation measures.

MITIGATION MEASURE UTL-2: PROVIDE ADEQUATE WASTEWATER INFRASTRUCTURE AND TREATMENT FOR PROJECTS

To ensure adequate wastewater infrastructure and treatment, as well as consistency with existing utility providers and State regulations, the City shall implement the following measures:

- **Infrastructure Maintenance. Infrastructure Maintenance.** Collaborate with Central San in their efforts to maintain wastewater conveyance, treatment, and disposal infrastructure in good working conditions within San Ramon.
- **New Development.** Coordinate the review of development proposals with Central San to ensure that new development can be adequately served.
- **Wastewater Services Requirement.** Require that wastewater services for new development do not negatively affect service to existing uses.
- **Capital Improvements Program.** When updating the Capital Improvements Program, identify and include the following:
  - Projects that could also support green infrastructure improvements.
  - Street improvements consistent with emergency vehicle access standards.
  - City-sponsored projects necessary to maintain or improve levels of performance.

MITIGATION MEASURE AQ-1 **REDUCE CONSTRUCTION CRITERIA POLLUTANT EMISSION (SEE SECTION 3.2, *AIR QUALITY,* FOR FULL MITIGATION MEASURE TEXT)**

MITIGATION MEASURE AQ-2 **REDUCE OPERATIONAL CRITERIA POLLUTANT EMISSIONS (SEE SECTION 3.2, *AIR QUALITY,* FOR FULL MITIGATION MEASURE TEXT)**

MITIGATION MEASURE AQ-3 **CONDUCT AND IMPLEMENT CONSTRUCTION HEALTH RISK ASSESSMENT (SEE SECTION 3.2, *AIR QUALITY,* FOR FULL MITIGATION MEASURE TEXT)**

MITIGATION MEASURE BIO-1 **CONDUCT PRE-CONSTRUCTION BIRD SURVEYS AND IMPLEMENT AVOIDANCE AND MINIMIZATION MEASURES (SEE SECTION 3.3, *BIOLOGICAL, AGRICULTURAL, AND FORESTRY RESOURCES,* FOR FULL MITIGATION MEASURE TEXT)**

MITIGATION MEASURE BIO-2 **CONDUCT PRE-CONSTRUCTION ROOSTING BATS SURVEYS AND IMPLEMENT AVOIDANCE MEASURES PRIOR TO REMOVAL. (SEE SECTION 3.3, *BIOLOGICAL, AGRICULTURAL, AND FORESTRY RESOURCES,* FOR FULL MITIGATION MEASURE TEXT)**

MITIGATION MEASURE CR-1: **PREPARE A HISTORICAL RESOURCES EVALUATION PRIOR TO APPROVAL FOR PROJECTS INVOLVING BUILDINGS 45 YEARS OR OLDER AND IMPLEMENT MITIGATION PRIOR TO AND DURING CONSTRUCTION. (SEE SECTION 3.4, *CULTURAL AND TRIBAL CULTURAL RESOURCES,* FOR FULL MITIGATION MEASURE TEXT)**

MITIGATION MEASURE CR-2: **PREPARE AN ARCHAEOLOGICAL RESOURCES ASSESSMENT PRIOR TO PROJECT APPROVAL AND IMPLEMENT MITIGATION PRIOR TO AND DURING CONSTRUCTION. (SEE SECTION 3.4, *CULTURAL AND TRIBAL CULTURAL RESOURCES,* FOR FULL MITIGATION MEASURE TEXT)**

MITIGATION MEASURE CR-3: **STOP WORK IN THE EVENT OF UNANTICIPATED CULTURAL RESOURCES DISCOVERIES DURING CONSTRUCTION (SEE SECTION 3.4, *CULTURAL AND TRIBAL CULTURAL RESOURCES,* FOR FULL MITIGATION MEASURE TEXT)**

MITIGATION MEASURE CR-4: **SUSPEND WORK AROUND TRIBAL CULTURAL RESOURCES IDENTIFIED DURING CONSTRUCTION (SEE SECTION 3.4, *CULTURAL AND TRIBAL CULTURAL RESOURCES,* FOR FULL MITIGATION MEASURE TEXT)**

MITIGATION MEASURE GEO-1: **PROTECT PALEONTOLOGICAL RESOURCES (SEE SECTION 3.5, *GEOLOGY, SOILS, AND MINERAL RESOURCES,* FOR FULL MITIGATION MEASURE TEXT)**

MITIGATION MEASURE GHG-1: **ADOPT AND IMPLEMENT A SAN RAMON QUALIFIED CLIMATE ACTION PLAN AND SAN RAMON CEQA GHG EMISSIONS THRESHOLDS (SEE SECTION 3.6, *GREENHOUSE GAS EMISSIONS AND ENERGY,* FOR FULL MITIGATION MEASURE TEXT)**

MITIGATION MEASURE HAZ-1: **CONDUCT PROJECT LANDSCAPE AND SLOPE DESIGN WILDFIRE RISK REDUCTION. (SEE SECTION 3.7, *HAZARDS, HAZARDOUS MATERIALS, AND WILDFIRE,* FOR FULL MITIGATION MEASURE TEXT)**

MITIGATION MEASURE NOI-1: INCLUDE AND IMPLEMENT CONSTRUCTION NOISE REDUCTION MEASURES. (SEE SECTION 3.10, *NOISE,* FOR FULL MITIGATION MEASURE TEXT)

MITIGATION MEASURE NOI-2: IMPLEMENT OPERATIONAL ROADWAY VEHICLE NOISE REDUCTION MEASURES (SEE SECTION 3.10, *NOISE,* FOR FULL MITIGATION MEASURE TEXT)

MITIGATION MEASURE NOI-3 PREPARE A NOISE AND VIBRATION ANALYSIS AND IMPLEMENT CONSTRUCTION VIBRATION CONTROL MEASURES AND SCREENING DISTANCES (SEE SECTION 3.10, *NOISE,* FOR FULL MITIGATION MEASURE TEXT)

MITIGATION MEASURE TRA-1: PREPARE AND IMPLEMENT CONSTRUCTION TRAFFIC MANAGEMENT PLANS (SEE SECTION 3.12, *TRANSPORTATION,* FOR FULL MITIGATION MEASURE TEXT)

MITIGATION MEASURE TRA-2: PREPARE AND IMPLEMENT VMT REDUCTION MEASURES (SEE SECTION 3.12, *TRANSPORTATION,* FOR FULL MITIGATION MEASURE TEXT)

Level of Significance

Less than Significant with mitigation

Water Supply Availability

Significance Criterion b:	Would the proposed plan have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Impact UTL-2 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD INCREASE DEMAND FOR WATER SUPPLY. HOWEVER, WITH ADHERENCE TO THE 2040 GENERAL PLAN GOALS AND POLICIES, WATER SUPPLIES WOULD BE ADEQUATE TO SUPPORT FUTURE DEVELOPMENT. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

While construction under the 2040 General Plan could necessitate the occasional use of minimal, limited quantity of water for dust control, mixing concrete, and washing equipment and vehicles, impacts related to water supplies are primarily limited to operational impacts. Therefore, 2040 General Plan construction impacts related to need for new water supply as a result of water demand would be less than significant.

Operation

The UWMPs for both DSRSD and EBMUD determined there are sufficient water supplies to accommodate anticipated regional population growth throughout their service areas according to the ABAG Plan Bay Area 2040 projections.[38,39] Similarly, the UWMPs for the plan area assess water

[38] Dublin San Ramon Services District (DSRSD). 2021. Urban Water Management Plan. https://www.dsrsd.com/home/showpublisheddocument/7749/637607511715070000. (accessed March 2023).
[39] East Bay Municipal Utility District (EBMUD). 2020. Urban Water Management Plan – Table 1-3, Population Projections. https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan. (accessed March 2023).

supply reliability for planned growth based upon ABAG 2040 projections. The DRSRD UWMP determined that sufficient water supply is available under normal-year, single-dry-year, and multi-year dry conditions. [40] The EBMUD UWMP determined that sufficient water supply is available under normal-year, single-dry-year, but may have supply shortfalls in the later years of multiple-dry-year conditions.[41] However, as discussed in Section 3.9, *Land Use Planning, Population, and Housing*, development facilitated by the 2040 General Plan could result in an increase in population that would exceed such ABAG population forecasts by 35 percent by 2040. As such, the proposed plan could result in insufficient water supplies to serve the proposed plan buildout in 2040.

Both the DSRSD and EBMUD UWMPs include measures to implement during periods of water shortages. The DSRSD UWMP includes a Water Shortage Contingency Plan (WSCP) that outlines actions DSRSD would take for managing water during water supply shortage conditions. These options have been developed based on DSRSD's previous experience with short-term demand management, including the recent droughts, and in consideration of long-term conservation goals. Similarly, the EBMUD WSCP includes existing and planned efforts to support meeting long-term water conservation planning goals to the year 2050. It presents a phased implementation of conservation measures based on threshold water production and customer demand levels designed to achieve a cumulative 70 million gallons per day (MGD) of water savings by 2050.[42]

Operation of net new residential and non-residential land use built out under the 2040 General Plan would increase the demand for water for both DSRSD and EBMUD. As discussed within Chapter 2.0, *Project Description*, maximum buildout of the 2040 General Plan represents development within the San Ramon Planning Area (i.e., General Plan area). As shown in Figure 3.13-1, there are two water service providers within the General Plan area, DSRSD and EBMUD. EBMUD serves the west, northern, and portions of the southern parts of San Ramon. DSRSD serves the eastern and remaining portions of the southern parts of San Ramon. If development facilitated by the 2040 General Plan is conducted through intensification of land use density by infill and redevelopment projects within the existing urban areas, including the San Ramon Village Specific Plan and City Center Project, such development would likely receive water supply through EBMUD. If development facilitated by the 2040 General Plan is conducted through annexation of adjacent unincorporated areas into the City, including the balance of the Dougherty Valley Specific Plan, and as-yet undeveloped parcels in the Westside and Northwest Specific Plans, such development may receive water supply through DSRSD.

The analysis herein conservatively evaluates the proposed plan's impacts on both EBMUD and DSRSD's water supply individually.[43]

The EBMUD 2020 UWMP sets forth 164 gallons per capita daily (gpcd) as a ten-year average water consumption rate baseline.[44] DSRSD's 2020 UWMP identifies 211 gpcd as a ten-year average water consumption rate baseline.[45] As discussed within Section 3.9, *Land Use Planning, Population, and*

[40] Dublin San Ramon Services District (DSRSD). 2021. Urban Water Management Plan. https://www.dsrsd.com/home/showpublisheddocument/7749/637607511715070000. (accessed March 2023).
[41] East Bay Municipal Utility District (EBMUD). 2020. Urban Water Management Plan – Table W-3, Supply & Demand Assessment, 2020-2050. https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan. (accessed April 2023).
[42] East Bay Municipal Utility District (EBMUD). 2020. Water Shortage Contingency Plan 2020. https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan. (accessed March 2023).
[43] This approach is conservative, as both EBMUD and DSRSD provide water supply to cities outside of the City of San Ramon.
[44] East Bay Municipal Utility District (EBMUD). 2020. Urban Water Management Plan – Table F-1, EBMUD 10-Year Baseline Daily Per Capita Water Use Calculation. https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan. (accessed April 2023).
[45] Dublin San Ramon Services District (DSRSD). 2021. Urban Water Management Plan, Table 5-3. https://www.dsrsd.com/home/showpublisheddocument/7749/637607511715070000. (accessed March 2023).

Housing, at maximum buildout the 2040 General Plan could facilitate the addition of approximately 26,269 net new residents in San Ramon from 2022 to 2040. Multiplying EBMUD's 164 gpcd by approximately 26,269 persons yields a daily water consumption value of 4,308,116 gpcd, which equates to 4,829 acre-feet per year (AFY) of water demand for the plan. Multiplying DSRSD's 211 gpcd by approximately 26,269 persons yields a daily water consumption value of 5,542,759 gcpd, which equates to 6,213 AFY of water demand for the project.

Based on the population projections presented above and existing and planned conservation measures, the water demand projections for the EBMUD and DSRSD service areas through 2045 are shown in Table 3.13-2. As shown therein, total demand for EBMUD and DSRSD through the year 2040 are approximately 225,298 AFY and 13,820 AFY, respectively. The 2040 General Plan would account for roughly 4,829 AFY or 2.1 percent of the total EBMUD's total demand in 2040. The 2040 General Plan would account for roughly 6,213 AFY or 45 percent of the total DSRSD's total demand in 2040. However, as noted above, this analysis conservatively evaluates the proposed plan's impacts on both EBMUD and DSRSD's water supply; buildout of the 2040 General Plan would account for only a portion of the total service area demand for both EBMUD and DSRSD as both districts serve San Ramon.

Table 3.13-2 DSRSD and EBMUD Current and Projected Water Demand

Year	2020	2025[2]	2030[2]	2035[2]	2040[2]	2045[2]
Total DSRSD Demand[1] (AFY)	N/A	11,993	13,363	13,807	13,820	14,034
Total EBMUD Demand[3] (AFY)	202,880	208,484	212,968	217,451	225,298	234,265

AFY = acre-feet per year

[1] Based on Demands for Potable and Non-Potable Water – Projected, as presented within Table 4-2 in DSRSD's 2020 UWMP

[2] Future demand projections are based on maximum dry-year demands not impacted by drought-related water shortage or economic conditions. Additionally, projected demands consider anticipated water use efficiency and conservation measures which result in reduced demands.

[3] Based on Average Annual Water Demand Forecast 2050 Demand Projections, as presented within Table 3-1 in EBMUD's 2020 UWMP

Source: DSRSD 2021[46], EBMUD 2020[47]

The EBMUD 2020 UWMP anticipates the existing and planned sources of water available in five-year increments though the General Plan planning horizon year 2040, as well as the projected availability of these water supplies in average, single-dry, and multiple-dry water year conditions. The EBMUD 2020 UWMP projects water supplies and demand from 2020 to 2050 using Plan Bay Area 2040 population projections, as shown in Table 3.13-3.

[46] Dublin San Ramon Services District (DSRSD). 2021. Urban Water Management Plan. https://www.dsrsd.com/home/showpublisheddocument/7749/637607511715070000. (accessed March 2023).

[47] East Bay Municipal Utility District (EBMUD). 2020. Urban Water Management Plan – Table W-3, Supply & Demand Assessment, 2020-2050. https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan. (accessed March 2023).

Table 3.13-3 EBMUD Projected Water Supply Demand for 2040

Water Year Type	Total Planned Supply (AFY)	Total Planned Demand (AFY)	Difference (AFY)
Average	225,298	225,298	0
Single-Dry	221,935	221,935	0
Second Dry Year	192,792	192,792	0
Third Dry Year	161,407	192,791	31,384

AFY = acre-feet per year

[1] Average (Normal) represents availability of water supply in wet, above normal, below normal and normal years. Single-Dry Year represents availability of water supply in dry and critically dry years. Multiple-Dry Year sequence represents a five-year drought such as 1929-1933 conditions.

Source: EBMUD 2020[48]

As shown in Table 3.13-3, EBMUD would not have sufficient supplies to satisfy demand during third dry year conditions. Under such conditions, EBMUD would implement its Water Shortage Contingency Plan (WSCP) to provide procedures to respond to water shortages and ensure a reliable water supply. In addition, EBMUD would implement its Drought Management Program that includes four stages (moderate, significant, severe, and critical) to address shortage conditions ranging from up to 40 percent to greater than 50 percent shortage. EBMUD strives to keep water use reductions at or below 15 percent, but in the case of a severe drought, mandatory water use reductions could exceed 15 percent. New development under the 2040 General Plan would be subject to the same drought restrictions that apply to all EBMUD customers. EBMUD also imposes drought rates, penalties, and regulations depending on the severity of drought that would further reduce water use and help recover costs for EBMUD. By imposing water restrictions in the first dry year of potential drought periods, EBMUD attempts to minimize water use restrictions in subsequent years if a drought persists.

The DSRSD 2020 UWMP also anticipates the existing and planned sources of water available in five-year increments though the General Plan planning horizon year 2040, as shown in Table 3.13-4, as well as the projected availability of these water supplies in average, single-dry, and multiple-dry water year conditions. An average water year is a year that most closely represents the average water supply available to the agency. A single-dry year is defined as the year that represents the lowest water supply available to the agency. A multiple-dry year period is defined as the period that represents the lowest average water supply availability for five consecutive dry years.

[48] East Bay Municipal Utility District (EBMUD). 2020. Urban Water Management Plan – Table W-3, Supply & Demand Assessment, 2020-2050. https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan. (accessed April 2023).

Table 3.13-4 DSRSD Projected Water Supply Demand for 2040

Water Year Type	Total Planned Supply (AFY)	Total Planned Demand (AFY)	Difference (AFY)
Average	16,864	16,864	0
Single-Dry	16,864	16,864	0
Multi-Dry Year 1	16,864	16,864	0
Multi-Dry Year 3	16,950	16,950	0
Multi-Dry Year 5	17,035	17,035	0

AFY = acre-feet per year

[1] Average (Normal) represents availability of water supply in wet, above normal, below normal and normal years. Single-Dry Year represents availability of water supply in dry and critically dry years. Multiple-Dry Year sequence represents a five-year drought such as 1929-1933 conditions.

Source: DSRSD 2021[49]

As shown above in Table 3.13-4, DSRSD does not anticipate supply deficits in normal years, single-dry years, or multiple dry years throughout the planning horizon. In Chapter 7 of its 2020 UWMP, Zone 7 has indicated it can meet retailer demands during five-year droughts beginning in 2025, 2030, 2035, 2040, and 2045. Therefore, Zone 7 supplies to DSRSD are assumed to equal DSRSD's projected potable water demands. Recycled water supplies are also assumed to be unaffected by dry conditions.[50]

Overall, both EBMUD and DSRSD (on their own and separately) are equipped to meet water demands for average, single-dry, and early multi-dry years. As shown Table 3.13-2, Table 3.13-3, and Table 3.13-4, water supply associated with the 2040 General Plan would be met by DSRSD supply in average and single-dry years, and multi-dry years. However, shown in Table 3.13-3, could result in additional demand on EBMUD water supply in multi-dry year conditions and could face supply shortfalls of approximately 31,384 AFY during a third dry year. However, EBMUD anticipates meeting future demands through implementation of its WSCP and Drought Management Program, as well as through balanced investments in conservation, recycled water, and water restrictions.

In addition to EBMUD WSCP conservation measures, the 2040 General Plan includes the following Open Space and Conservation Element guiding policies and implementing policies that would help reduce impacts on water supplies and encourage the conservation of water:

Guiding Policy 8.6-G-1: Promote the implementation of water quality and conservation programs and measures by San Ramon employers, residents, and public agencies.

Policy 8.6-I-1 Require new development projects to implement indoor water conservation and demand management measures consistent with building code standards and Climate Action Plan policies.

Policy 8.6-I-2 Require new development projects to implement outdoor water conservation and demand management measures.

Policy 8.6-I-3 New development in areas where recycled water service exists or is planned shall be plumbed with "purple pipe" and other measures necessary to accommodate non-potable water service.

[49] Dublin San Ramon Services District (DSRSD). 2021. Urban Water Management Plan. https://www.dsrsd.com/home/showpublisheddocument/7749/637607511715070000. (accessed March 2023).
[50] Zone 7 Water Agency (Zone 7). 2021. 2020 Urban Water Management Plan. https://www.zone7water.com/sites/main/files/file-attachments/0_final_2020_uwmp.pdf?1624903044. (accessed April 2023).

Policy 8.6-I-4 Require new development to meet the State Model Water Efficient Landscape Ordinance (MWELO).

Policy 8.6-I-5 Collaborate with DERWA (Dublin San Ramon Services District and East Bay Municipal Utilities District Recycled Water Authorities) to expand the recycled water distribution system in an efficient and timely manner.

Policy 8.6-I-7 Promote the protection of groundwater resources by collaborating with agencies that monitor and oversee clean-up efforts at existing sources of pollution.

Thus, while the development facilitated by the proposed plan would result in additional population beyond the projected population within Plan Bay Area 2040 and the DSRSD and EBMUD UWMPs, current water supplies and adherence to the 2040 General Plan policies would be adequate to meet 2040 General Plan per capita water demand. Furthermore, while the proposed General Plan would account for 45 percent of the total DSRSD demand, it would only account for approximately 2.1 percent of the total EBMUD demand in the year 2040. Demand generated by the proposed General Plan would be spread across both districts and would not result in full demand being placed on one single district. Therefore, the General Plan would not result in a significant demand on the overall water service system serving San Ramon. Water supply for the 2040 General Plan would be met in average and single-dry years but could result in shortfalls in early multi-dry year conditions. Additional demand would be met by the DSRSD CVP and water conservation measures as outlined in DSRSD WSCP which includes conservation surveys, rebate incentives, and education and outreach.[51] Therefore, with implementation of the aforementioned policies and requirement for future development of certain minimum size to prepare water supply assessments, 2040 General Plan impacts related to sufficient water supplies would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Wastewater Treatment Capacity

Significance Criterion c:	Would the proposed plan 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?

Impact UTL-3 DEVELOPMENT PROJECTED BY THE PROPOSED PLAN WOULD INCREASE DEMAND FOR WASTEWATER TREATMENT. HOWEVER, THE EXISTING WASTEWATER TREATMENT PLANT HAS SUFFICIENT CAPACITY FOR FUTURE DEVELOPMENT, AND THE 2040 GENERAL PLAN CONTAINS POLICIES TO ENSURE TREATMENT IS ADEQUATE. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

[51] In addition, future plans and projects facilitated by the 2040 General Plan that meet certain criteria under Senate Bill 610 will be required to prepare a project-level water supply assessment, which identifies and verifies water supply availability under normal water year conditions, single dry year conditions, and multiple dry year conditions.

Construction

Impacts related to adequate wastewater treatment capacity are limited to operational impacts. No respective construction impacts would occur.

Operation

Implementation of the proposed plan could have a significant impact if the wastewater treatment provider would not have sufficient capacity to serve the proposed new land uses in addition to the provider's existing commitments. As discussed above under *Environmental Setting*, a majority of wastewater collected within San Ramon is treated at the Central San WWTP. A portion of south San Ramon is served by DSRSD's WWTP, however, a majority of the General Plan growth is within Central San's service area. Therefore, impacts to wastewater will be evaluated under Central San's WWTP.

Growth and development facilitated by the 2040 General Plan would create additional demand for wastewater treatment in San Ramon. As discussed within Section 3.9, *Land Use/Planning and Population/Housing*, this additional housing, coupled with ongoing and planned development, would lead to a population growth of approximately 26,269 new residents by 2040. Under full buildout of the General Plan, this equates to an approximately 110,089 new residents by the year 2040. Because development facilitated by the 2040 General Plan would occur within the urbanized areas of the City, existing wastewater infrastructure exists.

The Central San WWTP has a treatment capacity of 54 million gpd and treats an average of 35.6 million gallons of wastewater per day.[52] On average, the WWTP processes approximately 32 million gallons of wastewater each day during the dry season and can see peak flows as high as an estimated 230 million gallons per day during an extreme winter storm. Central San collected and treated 35 mgd of wastewater in 2020 and this number is expected to increase to 41.8 mgd by 2045.[53] Both the 2020 wastewater levels, as well as the 2045 water levels are within the treatment plant's overall capacity of 54 mgd. Central San has developed a wastewater loading criteria of for 180 gallons per dwelling unit per day (gpd) for different types of land uses:[54]

- 180 gallons per dwelling unit per day (gpd) for single family dwelling units
- 105 gpd for multiple family dwelling units

Conservatively using the higher unit loading criteria of 180 gpd given the unknown future breakdown of single-family versus multi-family units, development facilitated by the General Plan would generate approximately 1,827,900 gpd, or 1.8 mgd, of wastewater.[55] This would constitute approximately 9 percent of the remaining capacity (19 mgd)[56] of the wastewater treatment plant.[57] Furthermore, in 2045 the projected wastewater demand, including the General Plan would be 43.6,[58] which would be within the capacity of the treatment plan. Therefore, the Central San

[52] Central Contra Costa Sanitary District (Central San). 2022. Central San Treatment Plant. https://www.centralsan.org/treatment-plant. (accessed March 2023).
[53] East Bay Municipal Utility District (EBMUD). 2021. Urban Water Management Plan 2020. https://www.ebmud.com/water/about-your-water/water-supply/urban-water-management-plan/. (accessed March 2023).
[54] Central Contra Costa Sanitary District (Central San). 2017. Comprehensive Wastewater Master Plan Technical Executive Summary. https://www.centralsan.org/sites/main/files/file-attachments/cwmp_technical_executive_summary.pdf?1510867241. (accessed March 2023).
[55] 1,827,900 gpd = 180 gpd * 10,155 residential units
[56] 19 mgd = 54 mgd (capacity) – 35 mgd (wastewater treatment in 2020).
[57] 9 percent = [1.8 mgd (General Plan wastewater demand) / 19 mgd (remaining capacity in 2020)] * 100 percent
[58] 43.6 mgd = 41.8 mgd (projected wastewater demand in 2045) + 1.8 mgd (General Plan wastewater demand)

treatment plant would have sufficient capacity to accommodate wastewater generated by the General Plan.

Additionally, Central San has prepared and is implementing a 10-year Capital Improvement Program (CIP) which serves to expand, upgrade, and replace its treatment plant and collection system. Central San has included a Collection System Program which aims to renovate aging sewers and to serve new development in Central San's service area. Specific near-term and long-term goals include addressing capacity needs by upsizing sewers to increase capacity, improving the reliability of Central San's pumping stations, and implementing projects to address renovation needs. Projects under the Collection System Program would reduce the likelihood of sewage overflows during dry and wet weather.[59] Implementation of Central San 10-year CIP and the existing WWTP capacity would ensure adequate wastewater treatment capacity for future development facilitated by the proposed plan. Therefore, 2040 General Plan operational impacts related to sufficient water treatment capacity would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

Landfill Capacity and Solid Waste Reduction Regulations Consistency

Significance Criterion d:	Would the proposed plan 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?
Significance Criterion e:	Would the proposed plan comply with federal, State, and local management and reduction statutes and regulations related to solid waste?

Impact UTL-4 DEVELOPMENT FACILITATED UNDER THE 2040 GENERAL PLAN WOULD INCREASE THE VOLUME OF SOLID WASTE GENERATED IN SAN RAMON. HOWEVER, EXISTING INFRASTRUCTURE THAT SERVES THE CITY, AS WELL AS POLICIES WITHIN THE 2040 GENERAL PLAN, WOULD ENSURE THAT THE CITY HAS ADEQUATE CAPACITY TO ACCEPT THE INCREASE IN SOLID WASTE AND COMPLY WITH FEDERAL, STATE, AND LOCAL MANAGEMENT REDUCTION REGULATIONS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Construction facilitated by the 2040 General Plan would involve the development of existing buildings, surface parking lots, and landscaping. This would result in the generation of solid waste from demolition and on-site construction activities. Future projects developed under the proposed plan that would entail construction and generate solid waste would subject to San Ramon Municipal Code Article 4 to ensure that construction-generated solid waste is not in excess of State or local standards or the capacity of local landfills, or otherwise impair the attainment of solid waste reduction goals. Additionally, the proposed General Plan includes Public Facilities and Utilities Element Policy 7.5-I-9, which requires new development projects to comply with the Municipal

[59] Central Contra Costa Sanitary District (Central San). 2015. FY 2015-2016 Capital Improvement Budget and Ten-Year Plan. https://www.centralsan.org/sites/main/files/file-attachments/2015_16_cib.pdf?1510722971 (accessed March 2023).

Code's construction and demolition debris diversion requirements. Therefore, construction impacts related to landfill capacity and solid waste reduction goals consistency would be less than significant.

Operation

Development facilitated by the proposed plan could result in the addition of up to 26,269 new residents and 10,155 residential units throughout San Ramon by the year 2040. Based on a solid waste generation rate of 5.31 pounds per dwelling unit per day,[60] the proposed plan would generate an estimated 53,923 pounds per day or about 19 million pounds per year (or 9,840 tons per year). According to CalRecycle, the Vasco Road Landfill has a maximum throughput of approximately 2,518 tons per day and anticipated closure date of December 31, 2022.[61] The proposed plan would yield an annual solid waste generation of approximately 53,923 pounds per day, which would account for approximately 1 percent of the throughput of the Vasco Road Landfill. In addition to the Vasco Road Landfill, solid waste could also be transferred to the Altamont Landfill, which has a maximum throughput of roughly 11,150 tons per day and an anticipated closure date of December 1, 2070.[62] Altamont Landfill has a remaining capacity of approximately 65,400,000 cubic yards and could also divert a portion of the solid waste from the General Plan area. Therefore, development facilitated by the 2040 General Plan would not generate solid waste in excess of the capacity of local solid waste infrastructure.

In addition, the 2040 General Plan contains the following goal and associated Public Facilities and Utilities Element policies to address solid waste generation and disposal within San Ramon.

Goal 7.5-G-1 Manage solid waste so that State goals are met or are exceeded and the best possible service is provided to the citizens and businesses of San Ramon.

Policy 7.5-I-1 Provide the best possible service for the collection of garbage, recyclables, and green waste that provides the best value to residents and businesses.

Policy 7.5-I-2 Provide and promote opportunities to reduce waste in all sectors of San Ramon, including residential, commercial, non-profit, government, and educational sectors.

Policy 7.5-I-3 Develop consumer friendly, convenient, affordable options for community-serving recycling services.

Policy 7.5-I-4 Through the development review process, encourage the provision of convenient recyclable material storage locations acceptable to the waste provider.

Policy 7.5-I-5 Comply with State requirements for proper handling and storage of solid waste, recyclables, and hazardous materials, diversion of solid waste from landfills, and provision of programs to make these activities feasible.

Policy 7.5-I-6 Ensure that solid waste programs effectively address community needs and issues.

[60] CalRecycle. 2019. Estimated Solid Waste Generation Rates. https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates (accessed March 2023)
[61] [61] CalRecycle. 2019 SWIS Facility/Site Activity Details Vasco Road Sanitary Landfill (01-AA-0010). https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/8. (accessed April 2023).
[62] CalRecycle. 2019 SWIS Facility/Site Activity Details Altamont Landfill & Resource Recovery (01-AA-0009). https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/7?siteID=7. (accessed April 2023).

Policy 7.5-I-7	Provide options for the safe disposal of hazardous waste and materials.
Policy 7.5-I-8	Require solid waste diversion (e.g. waste prevention, reuse, recycling, and composting).
Policy 7.5-I-10	Provide convenient recycling opportunities at large public events and venues.
Policy 7.5-I-11	Promote public and private efforts to recycle electronic waste.

Development facilitated by the proposed plan would be required to comply with these policies, including paying a fair share for solid waste services and achieving greater diversion rates than required by AB 939. Pursuant to AB 939 the City must divert 50 percent of solid waste from landfills. Local infrastructure and Republic Services would have the capacity to accommodate and collect solid waste generated by the proposed plan. Development facilitated by the proposed plan would also be required to demonstrate compliance with all applicable federal, State, and local regulations related to management and reduction of solid waste, including related to recycling and composting (e.g., California Senate Bill 1383). Therefore, the 2040 General Plan operational impact related to local solid waste infrastructure capacity and solid waste management and reduction regulations consistency would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less than significant without mitigation

3.13.5 Cumulative Impacts

The geographic scope of the cumulative utilities and service systems analysis is the DSRSD, EBMUD, Central San, San Ramon Public Works, and ACI service areas. Because of differences in the nature of the utility and service system topical areas, they are discussed separately. The cumulative analysis considers the nearby past, present, and reasonably foreseeable future plans and projects listed in Table 3-1 (refer to Chapter 3, *Environmental Impact Analysis*), as well as plans in the Town of Danville, and unincorporated Contra Costa County, and Plan Bay Area 2050.

Water Supply Infrastructure and Facilities

DSRSD and EBMUD provide potable water to residents and businesses within the Contra Costa and the East Bay, including San Ramon. Both DSRSD and EBMUD considered the existing capacity and future demand for capacity to determine needed updates to water facilities. In the course of preparing the UWMP, both providers estimated water demand of future development in the service area and forecast the needed facility upgrades. The forecast included supply facility upgrades needed to accommodate growth in the service area, including San Ramon. The DSRSD and EBMUD prepared UWMPs that considered the buildout potential across the service area. The UWMPs determined that the DSRSD and EBMUD would be able to provide adequate water supplies to the City during normal years and single dry years but EBMUD would see shortfalls during multiple dry years which would be offset through EBMUD's WSCP and Drought Management Program. However, while the development facilitated by the proposed plan would result in additional population beyond the projected population within Plan Bay Area 2040, adherence to the General Plan policies would reduce per capita water use. In addition, future developments that meet certain criteria

under Senate Bill 610 will be required to prepare a project-level water supply assessment, which identifies and verifies water supply availability under normal water year conditions, single dry year conditions, and multiple dry year conditions. Furthermore, cumulative plans and projects listed in Table 3-1 would be required to comply with provisions of the respective municipal codes and California Green Building Code related to water conservation. However, as discussed above, there is potential that infrastructure upgrades may be required to accommodate future growth. Therefore, the cumulative impacts related to water supply infrastructure expansion and construction would be less than significant with mitigation.

Wastewater Infrastructure and Facilities

Central San primarily provides wastewater collection and treatment services for the residents and business in San Ramon. Central San recently updated its Sewer System Management Plan which, the purpose of which is to reduce sanitary sewer overflows (SSOs) in the City's sanitary sewer collection system and to enhance compliance with the applicable permits, laws, and regulations as related to sanitary sewer overflows. The plan includes treatment facility upgrades needed to accommodate growth in the service area and maintain compliance with applicable regulatory standards for wastewater treatment and discharge. Cumulative plans and projects would generate volumes of wastewater. The City of Danville and unincorporated Contra Costa County anticipate development in the respective cities and determined that capacity would exist to service the demand for wastewater treatment facilities. However, as discussed above, there is potential that infrastructure upgrades may be required to accommodate future growth. Therefore, the cumulative impacts related to wastewater infrastructure expansion and construction would be less than significant with mitigation.

Stormwater Infrastructure and Facilities

Cumulative plans and projects predominantly consist of residential and commercial uses. The cumulative plans and projects would be located in urban areas that would be served by existing municipal storm drainage systems. Consistent with measures in the City of Danville Municipal Code, development in the cities would incorporate a stormwater control plan and stormwater collection systems into the development that would in turn reduce the volume and velocity of stormwater runoff that cumulative development would generate. Therefore, the cumulative impact related to stormwater infrastructure and facilities would be less than significant.

Solid Waste Facilities

The Vasco Road Landfill and Altamont Landfill operate solid waste landfills and oversee regional waste diversion programs as well as solid waste and recycling collection services. Vasco Road Landfill anticipates it would be able to absorb future growth. Cumulative plans and projects listed consist predominantly of residential and commercial uses. However, as with the surrounding areas, new cumulative development (residential and non-residential) would increase demand on solid waste facilities to receive, process, and store solid waste. The Vasco Road Landfill has a maximum throughput of approximately 2,518 tons per day and an anticipated closure date of December 31, 2022. The anticipated waste volume of development in the plan area represents approximately 1 percent of the throughput of the Vasco Road Landfill. Existing solid waste facilities provide sufficient capacity to serve development anticipated in the City of Danville and unincorporated Contra Costa County as well as existing, planned, and probable future land uses in the respective cities for the

foreseeable future. Therefore, the cumulative impact related to solid waste facilities would be less than significant.

Overall Level of Cumulative Significance

Less than Significant with mitigation

4 Other CEQA Sections

This chapter discusses growth-inducing impacts and irreversible environmental impacts that would be caused by the proposed plan.

4.1 Growth Inducing Impacts

There are two types of growth-inducing impacts that a plan or project may have: direct and indirect. To assess the potential for growth-inducing impacts, the proposed plan's characteristics that may encourage and facilitate activities that individually or cumulatively may affect the environment must be evaluated. CEQA Guidelines Section 15126.2(d) requires a discussion of a proposed plan or project's potential to foster economic or population growth, including ways in which a plan could remove an obstacle to growth. Growth does not necessarily create significant physical changes to the environment. However, depending upon the type, magnitude, and location of growth, it can result in significant adverse environmental effects. The CEQA Guidelines, as interpreted by the City, state that a significant growth-inducing impact may result if the proposed plan would:

- Induce substantial population growth in an area (for example, by proposing or facilitating new residences or employment-generating uses 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 a project and could accommodate unplanned future development.

Direct growth-inducing impacts occur when the implementation of a plan or 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 plans or 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 cannot be considered isolated from the development they facilitate and serve. Plans or 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.

4.1.1 Population and Employment Growth

As discussed in Section 3.9, *Land Use/Planning and Population/Housing*, the buildout anticipated under the 2040 General Plan could accommodate an estimated 26,269 new residents and 10,155 net new dwelling units in San Ramon. With the estimated growth under the 2040 General Plan, San Ramon would have a 2040 population of 110,089. Additionally, ABAG estimates that San Ramon would have an additional 17,775 jobs by 2040 for a total of 71,775 within San Ramon. Note that growth assumptions within this EIR are conservative and unlikely to come to complete fruition.

It is anticipated that buildout under the proposed plan would directly support the population growth and subsequent housing needs within San Ramon's projected growth estimates. Since much of San Ramon is currently developed and used for residential, commercial, and various other uses, implementation of the proposed plan would largely entail the development of vacant and underutilized parcels throughout San Ramon. As discussed under Impact LU-1 and LU-2, the proposed plan aims to intensify and densify development within the 2040 General Plan area to accommodate anticipated population growth and housing needs within San Ramon. Proposed 2040 General Plan land use and planning policies aim to provide guidance for orderly development while balancing the land use needs for housing, residential and commercial services, civic needs, and jobs.

It is the specific purpose of the proposed plan to guide growth and development in San Ramon such that infill development would be prioritized, and open space areas would be preserved and enhanced. Therefore, by its nature, the proposed plan is intended to reduce the potential for uncontrolled growth and associated environmental impacts. For the reasons discussed above, implementation of the proposed plan would not lead to direct or indirect growth impacts beyond what is anticipated and planned for by San Ramon.

4.1.2 Removal of Obstacles to Growth

As discussed under Impact LU-1 and LU-2 in Section 3.9, *Land Use/Planning and Population/ Housing*, much of San Ramon is developed, and the proposed plan encourages infill development to meet San Ramon's anticipated population and employment growth and housing needs. Although development of some vacant land within San Ramon could require new utility connections, new development is anticipated to occur where existing roads, water, parking lots, and sewer and other utilities are in place and in a manner that minimizes the impact of development on existing infrastructure and services. Major infrastructure extensions are not envisioned due to the level of existing development within San Ramon, and improvements would be primarily limited to the replacement and/or upgrade of aging facilities and enhancement of existing infrastructure as needed on a future project-by-project basis. All new development envisioned as part of the 2040 General Plan would occur within the San Ramon Planning Area (i.e., the General Plan area). Therefore, because new development would use existing facilities and major infrastructure extensions would not occur, the proposed plan would not remove obstacles to unplanned growth within San Ramon.

4.2 Irreversible Environmental Effects

CEQA Guidelines Section 15126(c) requires that EIRs evaluating plans and projects involving amendments to public plans, ordinances, or policies contain a discussion of significant irreversible environmental changes. CEQA also requires decision-makers to balance the benefits of a proposed plan or project against its unavoidable environmental risks in determining whether to approve a plan or project. This section addresses the use of non-renewable resources, the commitment of future generations to the proposed development and land use changes, and irreversible impacts associated with the development that would be facilitated by implementation of the 2040 General Plan.

Construction activity associated with planned development accommodated under the proposed plan would include the use of building materials and energy, some of which would be non-renewable resources. Consumption of these resources would occur with any development in the Bay Area region and would not be unique to San Ramon or the proposed plan. The addition of new

residential and non-residential development in San Ramon through 2040 would irreversibly increase local demand for non-renewable energy resources such as petroleum and natural gas. Increasingly efficient building fixtures and automobile engines, as well as implementation of policies included in the 2040 General Plan, are expected to offset the demand for non-renewable energy to some degree. Growth resulting from implementation of the proposed plan is not anticipated to significantly affect local or regional energy supplies; and project impacts related to energy consumption are further evaluated in Section 3.6, *Greenhouse Gas Emissions and Energy*.

Growth facilitated by the proposed plans would require an irreversible commitment of City services, water supply, and wastewater treatment. As discussed in Section 3.12, *Public Services and Recreation*, impacts to public services would be reduced to a less-than-significant level with implementation of policies included in the proposed plans. As discussed in Section 3.13. *Utilities and Service Systems,* impacts to utilities would remain significant and unavoidable as they relate to construction and operation of development facilitated by the proposed plan wastewater utility infrastructure.

Growth associated with the 2040 General Plan through 2040 would incrementally increase local vehicle miles traveled (VMT), noise levels, and regional air pollutant and greenhouse gas (GHG) emissions. As discussed in Section 3.2, *Air Quality*, and Section 3.6, *Greenhouse Gas Emissions and Energy*, implementation of the proposed plan policies, regional air pollution programs, and mitigation measures would reduce the air pollutant and GHG emissions associated with individual future development projects. As discussed in Section 3.4, *Cultural and Tribal Cultural Resources,* implementation of the proposed plan policies, historical resources regulations, and mitigation measures would be reduced to below significant thresholds.

As discussed in Section 3.10, *Noise*, implementation of proposed policies and mitigation measures would reduce the noise impacts associated with future growth to a less-than-significant level. As discussed in Section 3.12, *Transportation*, the policies in the proposed plan and mitigation measures would reduce many transportation impacts to a less-than-significant level; however, population growth facilitated by the proposed plan combined with regional population growth would result in additional vehicle trips on area roadways, resulting in significant and unavoidable traffic impacts on several roadways.

4.3 Mandatory Findings of Significance

Pursuant to CEQA Guidelines Appendix G Section XVIII, the following mandatory findings of significance analysis is provided.

a. Does the proposed plan have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

The 2040 General Plan would not facilitate development that would eliminate or threaten wildlife habitats. Therefore, as discussed in more detail in Section 3.3, *Biological, Agricultural, and Forestry Resources*, the 2040 General Plan would result in less-than-significant-with-mitigation impacts related to wildlife habitats. However, the 2040 General Plan could potentially eliminate important examples of the major periods of California history or prehistory. Therefore, as discussed in more

detail in Section 3.4, *Cultural and Tribal Cultural Resources*, the 2040 General Plan would result in less than significant impacts with implementation of mitigation related to cultural resources, specifically historical resources.

b. Does the proposed plan have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

While the proposed 2040 General Plan policies encourage residents, businesses, and the City to reduce energy, fuel use, water use, VMT, and solid waste generation and the associated GHG emissions, the proposed plan would still result in significant and unavoidable impacts related to VMT. The 2040 General Plan would also result in significant cumulative impacts for VMT. Therefore, the 2040 General Plan would result in an overall significant and unavoidable cumulative impact related to CEQA topics addressed within this EIR.

c. Does the proposed plan have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The 2040 General Plan would result in adverse effects on human beings. As discussed in more detail in Section 3.13, *Transportation*, implementation of the 2040 General Plan could result in significant and unavoidable impacts related to transportation that could, in turn, affect human beings. Therefore, the 2040 General Plan would result in an overall significant and unavoidable impact related to potential for adverse effects on human beings.

5 EIR Alternatives

5.1 Introduction

Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15126.6, this chapter contains a comparative impact assessment of alternatives to the 2040 General Plan (proposed plan). The primary purpose of an alternatives analysis under CEQA is to provide decision-makers and the public with a reasonable range of feasible alternatives to the proposed plan that could attain most of the basic plan's objectives, while avoiding or reducing any of the plan's significant adverse environmental effects.

Analysis of three alternatives to the proposed plan is provided for informational purposes and to allow decision-makers to consider the proposed plan in light of hypothetical alternative planning scenarios, thereby promoting CEQA's purpose as an information disclosure statute. This analysis is guided by the following considerations set forth under CEQA Guidelines Section 15126.6:

- An EIR need not consider every conceivable alternative to a plan or 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 plan or project objectives;
  - Infeasibility; or
  - Inability to avoid significant environmental effects.

5.2 Significant and Unavoidable Impacts

The implementation of the proposed plan was analyzed for potentially significant impacts related to each of the environmental issues discussed in Sections 3.1 through 3.13. The results of the analysis indicate that the proposed plan would result in the following significant and unavoidable impacts:

- **Transportation:** operation-related VMT

Mitigation measures (MMs) were identified for operational-related vehicle miles traveled (VMT)impacts; however, the identified mitigation would not reduce the impacts to less than significant. Thus, even though the proposed plan attempts to mitigate its impacts to the greatest extent feasible as required by CEQA, the mitigation is not technically feasible or sufficient or available to reduce impacts from significant and unavoidable.

5.3 Alternatives to the Proposed Plan

Pursuant to CEQA Guidelines Section 15126.6, this EIR presents a range of reasonable alternatives to the proposed plan for analysis and evaluation of their comparative merits. These alternatives are considered to cover the range of development alternatives that would meet the basic objectives of the plans while lessening one or more of its significant impacts. CEQA Guidelines Section 15126.6(a) states that an EIR need not evaluate every conceivable alternative. Information has been provided for each alternative that would allow meaningful comparison with the proposed plan.

The three alternatives to the proposed plan analyzed in this chapter are as follows:

- **Alternative 1:** Adopted General Plan Buildout (i.e., "No Project")
- **Alternative 2:** New Infill Mixed Use within the City Core and Additional Retail Shopping Alternative
- **Alternative 3:** New Infill Mixed Use within the City Core Alternative

Table 5-1 shows the alternatives' components summary; this EIR Alternatives analysis examines the net change from the proposed plan in terms of potential physical environmental impacts. Detailed descriptions of the alternatives are included in the impact analyses for each Alternative in Sections 5.5 through 5.7.

Table 5-1 Alternatives Buildout Projections Summary[1]

Feature	Proposed Plan	Alternative 1	Alternative 2	Alternative 3
Non-residential (gsf)	347,339	4,900,000	-827,000	-827,000
Residential (units)	10,155	5,392	11,812	13,055
Additional Population Estimate (Assumes 2.92 persons per household[2])	26,269	13,033	30,874	34,328

Population Estimate assumptions:

5.00% vacancy rate, consistent with ABAG RHNA Allocation Methodology https://www.hcd.ca.gov/community-development/housing-element/docs/abagrhna-final060920(r).pdf

2.92 persons per household, assumed constant from DOF E-5 2022[2].

1.002 population/household, calculated from DOF E-5 2022[2], assumed constant from 2022.

Source: San Ramon, City of. 2023. San Ramon 2040 General Plan EIR Alternatives Descriptions.

[1] Buildout projections in this table refers to the net change from existing (2022) to proposed (2040).

[2] California Department of Finance. 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State 2010-2022.

5.4 Plan Objectives

As described in Chapter 2, *Project Description*, the City's 2040 General Plan objectives are as follows:

- Outline a vision for San Ramon's long-range physical and economic development and resource conservation that reflects the aspirations of the community and the smart growth mandate of Measure G (1999);
- Provide strategies and specific implementing actions that will allow this vision to be accomplished;
- Establish a basis for judging whether specific development proposals and public projects are in harmony with Plan policies and standards;
- Allow City departments, other public agencies, and private developers to design projects that will enhance the character of the community, preserve and enhance critical environmental resources, and minimize hazards; and
- Provide the basis for establishing and setting priorities for detailed plans and implementing programs, such as the Zoning Ordinance, the Capital Improvement Program (CIP), Climate Action Plan, specific plans, etc.

5.5 Alternative 1: Adopted General Plan Buildout

The *CEQA Guidelines* (Section 15126.6[e][2]) require that the alternatives discussion include an analysis of a "No Project" Alternative. Pursuant to CEQA, the "No Project" Alternative refers to the analysis of existing conditions and what would reasonably be expected to occur in the foreseeable future if the proposed plan was not approved. This is based on current plans and consistent with available infrastructure information. The "No Project" Alternative typically will proceed along one of two lines: (1) when a plan or project is a revision of an existing regulatory plan or policy, the "No Project" Alternative will be continuation of the existing plan or policy; or (2) if a plan or project is a development project on identifiable property, the "No Project" Alternative is the circumstance under which a project does not proceed. Thus, in the case of this programmatic EIR for a proposed plan, the "No Project" Alternative would be a No New Plan Alternative that represents the continuation of existing General Plan designations throughout San Ramon. Full buildout under those existing designations is assumed to occur under this alternative. Typical development assumptions are included in the below analysis of this alternative, including compliance with applicable regulations or typical City-required measures.

5.5.1 Description

The Adopted General Plan Buildout Alternative (or Alternative 1) assumes that the current land use and zoning designations would not change from the City's existing, adopted (2035) General Plan. The 2040 General Plan would not be adopted. Current land uses for residential units and non-residential areas would remain unchanged under Alternative 1. Future buildout would continue to follow the current designations, resulting in a net change between 2022 and 2040 of 5,392 residential units and 4,900,000 gsf of non-residential land uses. For purposes of the environmental analysis, it is assumed that the San Ramon population net change estimate from 2022 to 2040 would be 13,033, which represents a relative population decrease of 13,236 compared to the proposed plan (see Table 5-1). Alternative 1 would not update the San Ramon General Plan. Without the 2040 General Plan, San Ramon would lack a long-term blueprint for development throughout the General Plan area and not meet 2023-2031 RHNA requirements.

5.5.2 Impact Analysis

Aesthetics

Under Alternative 1, fewer residential units would be developed than under the proposed plan, consistent with allowed existing land use and zoning designations. However, 4,900,000 gsf of non-residential buildout is anticipated under the adopted (2035) San Ramon General Plan, compared to 347,339 gsf of non-residential buildout anticipated under the proposed plan. As such, there would be more sources of light or glare within the General Plan area that could adversely affect daytime or nighttime views. However, the San Ramon Municipal Code contains development and design standards that seek to preserve and enhance the visual character and natural features of the community, which individual future projects would be required to follow. There would also be less potential for visual character of the General Plan area to be altered, as development facilitated by the existing General Plan would follow current policies that would prevent this impact. Therefore, Alternative 1 impacts related to aesthetics would be less than significant.

The proposed plan's impacts related to aesthetics would be less than significant (see Section 3.1, *Aesthetics*). Alternative 1 would have a greater level of aesthetics impacts compared to the proposed plan, but not to the extent of increasing the impact significance level. This greater level of impact would be due to the lack of an update in development design and lighting standards that the proposed plan would provide. Consequently, this alternative would not meet the plan objectives that focus on allowing City departments, other public agencies, and private developers to design projects that will enhance the character of the community without the proposed plan's development design and lighting standards.

Air Quality

Under Alternative 1, fewer residential units would be developed than under the proposed plan, consistent with allowed existing zoning. However, the adopted (2035) General Plan would facilitate a much larger amount of non-residential development compared to the proposed plan that would result in temporary construction-related air quality impacts from grading and construction and longer-term air quality impacts from building operation (energy usage, maintenance). While individual future project mitigation could result in construction-related criteria air pollutant and toxic air contaminant emissions, such projects would be required to mitigate emissions as applicable as well as comply with BAAQMD basic control measures to comply with standard permit conditions. Therefore, Alternative 1 impacts related to air quality would be less than significant with mitigation.

The proposed plan's impacts related to air quality would be less than significant with mitigation (see Section 3.2, *Air Quality*). Alternative 1 would result in greater levels of criteria pollutant and toxic air contaminant emission generation impacts compared to the proposed plan due to the much larger amount of non-residential development but not to the extent of changing the impact significance level or not requiring mitigation. However, this alternative would meet the plan objective that focuses on establishing and setting priorities for detailed plans and implementing programs, as the adopted General Plan does contain a goal to update the Climate Action Plan.

Biological, Agriculture, and Forestry Resources

Under Alternative 1, fewer residential units and increased non-residential development would be developed compared to the proposed plan, consistent with allowed existing zoning. Development changes related to wildlife, habitat, and waters of the United States conservation policies would follow the adopted (2035) General Plan guidelines. Similar to the proposed plan, areas under the current General Plan currently developed with residential and non-residential uses likely are not suitable habitat for special-status species, wetlands, agricultural land, and forests. This alternative would adhere to the current policies and required mitigation related to biological resources to reduce the impact of significance level on biological, agriculture, and forestry resources. Therefore, Alternative 1 biological, agriculture, and forestry resources impacts would be less than significant with mitigation.

The proposed plan's impacts related to biological, agriculture, and forestry resources would be less than significant with mitigation (see Section 3.3, *Biological, Agriculture, and Forestry Resources*). Alternative 1 would have a greater impact related to biological resources due to the relative increase in buildout footprint area, but not to the extent of changing the impact significance level or not requiring mitigation. However, this alternative would not meet the proposed plan objective that allow City departments, other public agencies, and private developers to design projects that preserve and enhance critical environmental resources, as the proposed plan includes new and updated conservation goals, policies and programs, not found in the existing General Plan.

Cultural and Tribal Cultural Resources

Under Alternative 1, fewer residential units and increased non-residential development would be developed compared to the proposed plan, consistent with allowed existing zoning. Two known historical resources, the historical district Forest Home Farms and El Nido House, are identified as existing cultural resources in the General Plan area (see Section 3.4, *Cultural and Tribal Cultural Resources*). These and other not-yet-identified historic resources could be altered as part of buildout of the adopted (2035) General Plan, which would require a mitigation measure to prepare historic resources evaluations for projects involving buildings 45 years or older. Therefore, Alternative 1 cultural and tribal resources impacts would be less than significant with mitigation.

The proposed plan's impacts related to Cultural and Tribal Resources would be less than significant with mitigation (see Section 3.4, Cultural and Tribal Cultural Resources). Alternative 1 would have greater cultural resources impacts compared to the proposed plan due to the relative increase in buildout footprint potential, but not to the extent of changing the impact significance level or not requiring mitigation due to the lack of refined General Plan policies related to assessing and protecting historically eligible buildings and structures 45 years or older. Consequently, this alternative would not meet the plan objectives that establish a basis for judging whether specific development proposals and public projects are in harmony with Plan policies and standards without goals to assess and protect cultural resources.

Geology, Soils, and Mineral Resources

Under Alternative 1, fewer residential units and increased non-residential development would be developed compared to the proposed plan, consistent with allowed existing zoning. Development would follow existing policies related to geology and soils. However, these policies would need to be updated in order to meet current State and local regulations that would reduce seismic hazards. Furthermore, the adopted (2015) General Plan would also require implementation of mitigation to protect and minimize potential adverse effects on paleontological resources. As such, Alternative 1 geology, soils, and mineral resources impacts would be less than significant with mitigation.

The proposed plan's impacts related to geology/soils and mineral resources would be less than significant with mitigation (see Section 3.5, *Geology, Soils, and Mineral Resources*). Alternative 1 would have a greater impact level compared to the proposed plan due to the relative increase in buildout footprint potential and lack of policy updates to protect paleontological resources, but not to the extent of increasing the impact significance level or not requiring mitigation. Without the proposed policy updates, this alternative would not meet plan objectives that allow City departments, other public agencies, and private developers to design projects that will minimize hazards.

Greenhouse Gas Emissions and Energy

Under Alternative 1, fewer residential units and increased non-residential development would be developed compared to the proposed plan, consistent with allowed existing zoning. Impacts related to greenhouse gas emissions generation and energy consumption would occur with development under the adopted (2035) General Plan and from current population growth rates. However, the existing General Plan does not have a requirement to update the current 2011 San Ramon CAP to incorporate the 2030 and 2045 State targets, and as such, contains no established mechanism for the City to demonstrate compliance with meeting these updated standards. Mitigation would be required to adopt a Climate Action Plan and adopt the California Building Energy Efficiency

Standards so that the BAAQMD CEQA thresholds for GHG emissions and State energy efficiency requirements would be met. Therefore, Alternative 1 impacts related to GHG emissions would be less than significant with mitigation.

The proposed plan's impacts related to GHG emissions and energy would be less than significant with mitigation (see Section 3.6, *Greenhouse Gas Emissions and Energy*). The existing General Plan buildout would have a greater impact compared to the proposed plan, given the relative increase in development area operations and the lack of mitigation to adopt an updated Climate Action Plan. However, Alternative 1 would meet the 2040 General Plan objective to provide a basis for establishment and setting priorities for detailed plans, as one of the existing goals is to maintain the City's adopted CAP as an implementation strategy, which can be met when adopting mitigation measures for this impact.

Hazards, Hazardous Materials, and Wildfire

Under Alternative 1, fewer residential units and increased non-residential development would be developed compared to the proposed plan, consistent with allowed existing zoning. Impacts would occur based on the construction and operational activities following the adopted (2035) General Plan. Development under the current adopted General Plan would follow current goals and policies related to hazards, hazardous materials, and wildfire. However, the current General Plan would not include policies to conduct project landscape and slope design to reduce wildfire risk. Furthermore, population and VMT growth would continue as projected under the current plan but would not account for future population growth that was calculated under the proposed plan. Lack of preparation for this population increase could result in roadway and evacuation route congestion during an emergency. Therefore, Alternative 1 impacts related to hazards, hazardous materials, and wildfire would be significant and unavoidable.

The proposed plan's impacts related to hazards would be less than significant with mitigation (see Section 3.7, *Hazards, Hazardous Materials, and Wildfire*). Alternative 1 would have an increased impact level compared to the proposed plan due to the lack of policies to reduce wildfire risk and lack of preparedness for unaccounted population growth. However, the current General Plan would meet project objectives focused on allowing City departments, other public agencies, and private developers to design projects that would minimize hazards.

Hydrology and Water Quality

Under Alternative 1, fewer residential units and increased non-residential development would be developed compared to the proposed plan, consistent with allowed existing zoning. Ground-disturbing construction activities that could potentially affect water quality from sedimentation or accidental spills would occur following current adopted zoning. Any changes related to hydrology, water quality, watersheds and drainage patterns, flood and inundation hazards, and ground water resource management caused by changes in existing development would follow the same adopted standards. Therefore, Alternative 1 impacts related to hydrology and water quality would be less than significant.

The proposed plan's impacts related to hydrology and water quality would be less than significant (see Section 3.8, *Hydrology and Water Quality*). The adopted (2035) General Plan's buildout would have a similar less-than-significant impact related to hydrology and water quality given compliance with adopted standards. However, this alternative would not incorporate the proposed plan's goal to allow City departments, other public agencies, and private developers to design projects that will

preserve and enhance critical environmental resources, due to the lack of hydrology and water quality enhancements that would be implemented under the proposed plan.

Land Use Planning, Population, and Housing

Under Alternative 1, fewer residential units and increased non-residential development would be developed compared to the proposed plan, consistent with allowed existing zoning. Applicable land use plans, policies, and regulations would continue to be implemented across the General Plan area. However, the adopted (2035) General Plan does not account for the increased need in housing opportunity sites for housing that would be required per RHNA requirements for the City. This alternative would not include allowance for the increase in required residential units. Therefore, Alternative 1 land use, population, and housing impacts would be significant and unavoidable.

The proposed plan's impacts related to land use/planning and population/housing would be less than significant (see Section 3.9, *Land Use Planning, Population, and Housing*). Alternative 1 would have a greater impact related to land use planning, population, and housing compared to the proposed plan due to the current plan lacking enough housing sites to accommodate RHNA need and assumed population growth. Without this, population growth and RHNA needs would not be met, thus resulting in a greater impact level. In addition, this alternative would not meet the proposed plan objective to provide internally-consistent General Plan strategies and specific implementing actions that will assist in outlining a vision for the City of San Ramon's development, as the current General Plan would not be consistent with the existing Housing Element.

Noise

Under Alternative 1, fewer residential units and increased non-residential development would be developed compared to the proposed plan, consistent with allowed existing zoning. Temporary construction noise and vibration generation and operational noise generation would occur with buildout occurring under the adopted (2035) General Plan. However, this alternative's noise impacts would be reduced with mitigation. Therefore, Alternative 1 impacts related to noise would be less than significant with mitigation.

The proposed plan's impacts related to noise would be less than significant with mitigation (see Section 3.10, *Noise*). Alternative 1 would have a similar impact level related to noise compared to the proposed plan with implementation of typical mitigation. Without mitigation, Alternative 1 would not establish a basis for projects to be in harmony with updated Plan policies and standards, thus not meeting the goals of the proposed plan.

Public Services and Recreation

Under Alternative 1, fewer residential units and increased non-residential development would be developed compared to the proposed plan, consistent with allowed existing zoning. The population increase resulting from development facilitated by the adopted (2035) General Plan would occur as projected as would an increased demand and usage of public services and recreational facilities. Alternative 1 population growth would need associated fire and police protection as well as school and recreational services that can be accommodated by existing service facilities and services. However, Alternative 1 public services and recreation impacts would be less than significant.

The proposed plan's impacts related to public services and recreation would be less than significant (see Section 3.11, *Public Services and Recreation*). The existing General Plan buildout would have a lesser impact of less-than-significant compared to the proposed plan, due to Alternative 1's relative

decrease in projected population growth, but not to the extent of decreasing the impact significance level. However, this alternative would not meet the proposed plan objectives that would help outline a vision for San Ramon's long-range development in the most efficient way due to the current General Plan not being up to date in a way that would be consistent with the existing Housing Element.

Transportation

Under Alternative 1, fewer residential units and increased non-residential development would be developed compared to the proposed plan, consistent with allowed existing zoning. The General Plan Area-wide Home-Based and Home-Work VMT Summary tables in Section 3.12, *Transportation* (see Tables 3.12-2 and 3.12-3) concluded that home-based VMT per resident under the adopted General Plan would be 19.0 and home-work VMT per resident under the adopted General Plan would be 15.0. Under this alternative, San Ramon VMT per resident would be higher than the Countywide average VMT per resident. Furthermore, changes in VMT per resident and per employee would follow current zoning development standards, which current do not include plans to implement a transportation demand management (TDM) plan to reduce VMT generated by an individual project. Therefore, Alternative 1 transportation impacts would be significant and unavoidable.

The proposed plan's impacts related to transportation would be significant and unavoidable (see Section 3.12, *Transportation*). Alternative 1 would have a greater impact related to transportation compared to the proposed plan due to the current lack of plans towards reducing any future individual project VMT increases. This alternative also would not meet the proposed plan goal to align with the vision smart mandated growth without transportation-related impacts (specifically VMT) being accounted for or managed.

Utilities and Service Systems

Under Alternative 1, fewer residential units and increased non-residential development would be developed than under the proposed plan, consistent with allowed existing zoning. The population increase resulting from development facilitated by the adopted (2035) General Plan would occur as projected as would an increased demand and usage of utility facilities and service systems. Alternative 1 population growth would need associated water, wastewater, and stormwater facilities that can be accommodated by existing utility facilities and service systems. Therefore, Alternative 1 utilities and service systems impacts would be less than significant.

The proposed 2040 General Plan's impacts related to utilities and service systems would be less than significant (see Section 3.13, *Utilities and Service Systems*). The existing General Plan buildout would have a lesser impact compared to the proposed plan due to the existing plan's lower residential unit count, which would have less of a potential impact compared to the proposed plan's larger population projection. However, this lower residential unit count and reduced non-residential development would result in fewer potential impacts to utility and service systems but not to the extent of reducing the overall significance level. This alternative would not meet the proposed plan's objective to outline a vision for San Ramon's long-range physical and resource conservation that reflects the aspirations of the community and the smart growth mandate due to the lack of population increase anticipation compared to what the proposed plan has projected.

5.5.3 Conclusion

In summary, Alternative 1 would not avoid the significant and unavoidable impact related to transportation (operational-related VMT). Alternative 1 would result in additional significant and unavoidable impacts related to GHG emissions and energy, wildfire risk, and land use planning and population growth. Impacts related to aesthetics, air quality, biological resources, cultural resources, and geology/soils, would be greater but remain at a similar significance level. Impacts related to public services and utilities would also be lesser but remain at a similar significance level. Impacts related to hydrology/water quality and noise would have a similar significance and impact level. Overall, this alternative would not allow City departments, other public agencies, and private developers to design projects that will enhance the character of the community, preserve and enhance critical environmental resources, and minimize hazards.

5.6 Alternative 2: New Infill Mixed Use within the City Core and Additional Retail Shopping Alternative

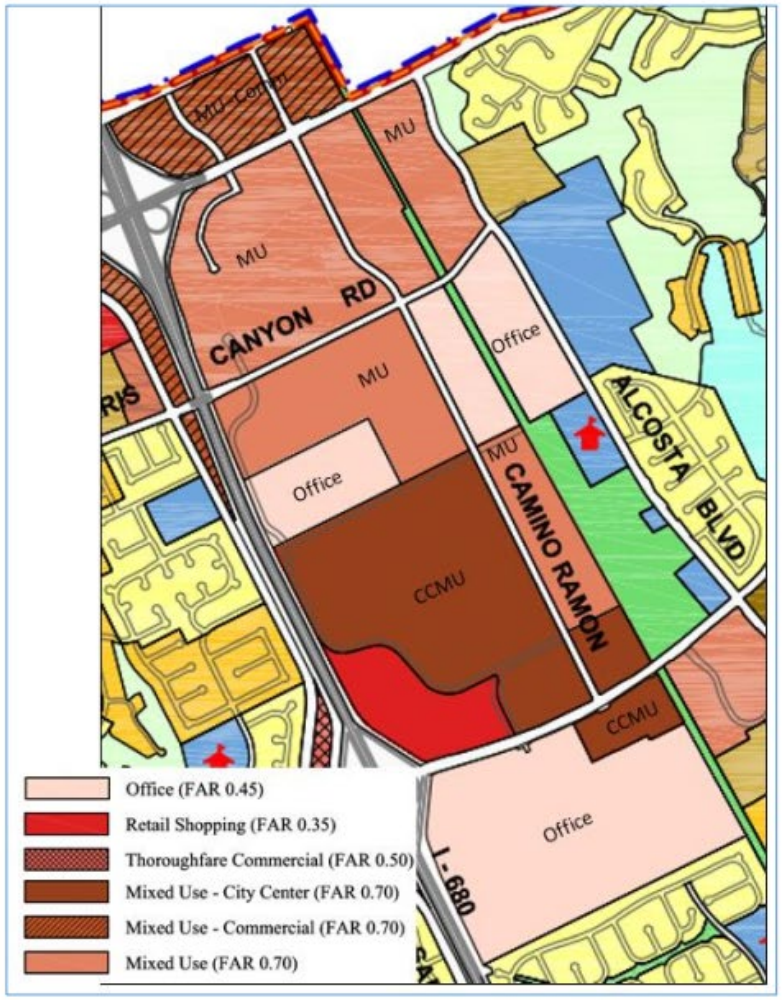
5.6.1 Description

The New Infill Mixed Use within the City Core and Additional Retail Shopping Alternative (or Alternative 2) would adopt the 2040 General Plan but instead re-designate an approximately 130-acre portion of the Bishop Ranch Business Park from "Office" to "Downtown Mixed Use – South." The purpose of the Downtown Mixed-Use, South (DMU-S) zone is to encourage an integrated transit-oriented and mixed use neighborhood, extending the activity of City Center across Bollinger Canyon Road with shops, offices, and a diversity of housing opportunities set in an urban environment of walkable streets, parks and trails. The intent is to promote a broad mix of uses which incorporates a transition of primarily commercial uses adjacent to the freeway and Bollinger Canyon Road, with residential uses located behind or above the primary commercial uses in close proximity to transportation networks. The allowed density in the DMU-S zone ranges from a minimum of 20 dwelling units per acre to a maximum of 60 dwelling units per acre. Development is generally intended to be more vertical in nature and allowance for higher density closer to the arterial roadway, with an appropriate transitional buffer adjacent to existing residential uses located to the south. Commercial uses (i.e., restaurants and retail) are encouraged along major streets. Development could be stand-alone, vertical, or horizontal mixed-use configurations. DMU-S would be a transit-oriented and mixed-use neighborhood extending the activity of City Center across Bollinger Canyon Road with commercial businesses and diverse housing opportunities. Appendix A-2 describes the allowed land uses in the DMU-S zone.

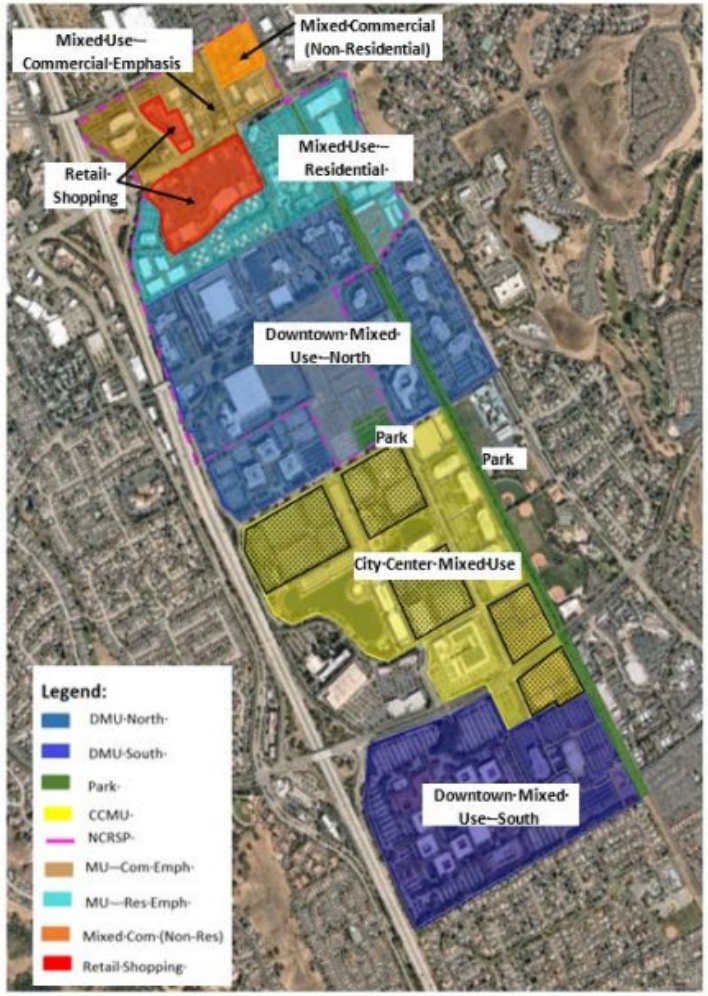
41.4-acres within four existing Mixed Use shopping centers would be re-designated to "Retail Shopping," and consists of twenty-two (22) parcels. This would promote infill development within the large parcels of the Bishop Ranch Business Park, which supports higher density, mixed use development, while also retaining retail shopping opportunities in the City. Figure 5-1 depicts the land use updates proposed under Alternative 2.

Figure 5-1 Alternative 2 Land Use and Zoning

General Plan Land Use – Existing



General Plan Land Use and Zoning – Proposed



General Plan Land Use – Existing

General Plan Land Use – Proposed

Zoning District – Existing

Zoning District – Proposed

General Plan Land Use – Existing

General Plan Land Use – Proposed

Zoning District – Existing

Zoning District – Proposed

The re-designated 41.1-acres of Retail Shopping would remove the residential option on these parcels, reducing overall housing unit capacity by 1,243 units. Residential unit yield would be reduced in Crow Canyon Commons shopping center by 654 units, Marketplace shopping center by 266 units, Country Club shopping center by 203 units, and Magnolia Square shopping center by 120 units. However, an existing 1.3 million square feet of office space would be removed from the DMU-S to instead incorporate 125,000 square feet (2.9 acres) of new commercial uses and a residential buildout capacity of 2,900 units with approximately 80 percent as multi-family unit, resulting in an overall decrease in non-residential GSF and no net loss of residential capacity. The DMU-S area will allow a density range of 20 to 60 dwelling units per acre with at least 35 percent of the gross site area dedicated to circulation and open space. In addition, these parcels are located within a regional employment center, near the City Center Project, and public transit. Future buildout under Alternative 2 would result in a net change between 2022 and 2040 of 11,812 more residential units and 827,000 less gsf of non-residential land uses. For purposes of the environmental analysis, it is

assumed that the San Ramon population net change estimate from 2022 to 2040 would be 30,874, which represents a relative population increase of 4,605 compared to the proposed plan (see Table 5-1).

5.6.2 Impact Analysis

Aesthetics

Under Alternative 2, a greater number of residential units and a less amount of non-residential development would occur compared to the proposed plan. Development under Alternative 2 would be similar to the proposed plan buildout, but 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S) with 2.9 acres of new commercial uses and a residential buildout capacity of 2,900 units. 41.1 acres of existing "Mixed Use" throughout the City would be re-designated to "Retail Shopping" and would consist of retail shopping buildout. While new development would potentially create new sources of light and glare, there would be less potential compared to the proposed plan due to the decreased amount of non-residential development. Additionally, it would be unlikely for the visual character to be altered, as any development under this alternative would follow any policies that would prevent any further impacts. Therefore, Alternative 2 impacts related to aesthetics would be less than significant.

The proposed plan's impacts related to aesthetics would be less than significant (see Section 3.1, *Aesthetics*). Alternative 2 would have a similar level of aesthetics impact compared to the proposed plan due to the decrease in non-residential and increase in residential development within the DMU-S area and decrease in residential development within the Retail Shopping area having similar visual impacts on the General Plan area. However, this alternative would meet the proposed plan objective to allow City departments, other public agencies, and private developers to design projects that will enhance the character of the community, as the development standards for Retail Shopping and DMU-S would be applied to ensure that future project designs will enhance the character of the community.

Air Quality

Under Alternative 2, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 2 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S) with 2.9 acres of new commercial uses and a residential buildout capacity of 2,900 units. 41.1 acres of existing "Mixed Use" throughout the City would be re-designated to "Retail Shopping" and would consist of retail shopping buildout. As such, there would be construction-related impacts in order to remove office space to construct and operate new commercial use, residential, and retail shopping development. Under this alternative, similar construction- and operational-related air quality emissions mitigation would be implemented. In addition, Alternative 2 would add more residential units and job opportunities from commercial buildout to the Bishop Ranch Business Park area, which supports higher density, mixed use development. The increased density would promote less VMT per capita that in turn would result in less operational impacts related to air quality. Therefore, Alternative 2 air quality impacts would be less than significant with mitigation.

The proposed plan's impacts related to air quality would be less than significant with mitigation (see Section 3.2, *Air Quality*). Alternative 2 would have a similar level of impact compared to the proposed plan that requires mitigation to prevent further construction- and operation-related air

quality impacts (MMs AQ-1 through AQ-4). Alternative 2 would meet the proposed plan objective to provide the basis for establishing and setting priorities for detailed plans and implementing programs that would address air quality impacts from construction and operational activities.

Biological, Agriculture, and Forestry Resources

Under Alternative 2, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 2 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). 41.1 acres of existing "Mixed Use" throughout the City would be re-designated to "Retail Shopping" and would consist of retail shopping buildout. Development under Alternative 2 would be similar to the proposed plan buildout, but with different land uses in the Bishop Ranch Business Park area and within four existing shopping centers. Development would be required to implement the same federal, State, and local regulations to not impact agricultural, forestry, and sensitive or special status biological resources in the area. However, development in the General Plan area could result in some potential direct or indirect impacts on nesting birds and roosting bats. As a result, the same policies and mitigation would be required for development under Alternative 2 to occur. Therefore, Alternative 2 biological, agriculture, and forestry resources impacts would be less than significant with mitigation.

The proposed plan's impacts related to biological resources would be less than significant with mitigation incorporated (see Section 3.3, *Biological, Agriculture, and Forestry Resources*). Alternative 2 would have a similar impact level on biological resources and requirement to implement mitigation (MMs BIO-1 and BIO-2) compared to the proposed plan. This alternative would achieve the proposed plan objective related to outlining a vision for the City of San Ramon's resource conservation.

Cultural and Tribal Cultural Resources

Under Alternative 2, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 2 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). 41.1 acres of existing "Mixed Use" throughout the City would be re-designated to "Retail Shopping" and would consist of retail shopping buildout. This alternative would facilitate development of residential and non-residential land uses that could in turn result in ground disturbance and the conversion of existing properties and structures over 45 years of age that could be eligible for listing as a historic resource. However, this alternative would still require mitigation related to potential alteration of historic and archeological resources due to potential development. Therefore, Alternative 2 cultural and tribal resources impacts would be less than significant with mitigation.

The proposed plan's impacts related to Cultural and Tribal Resources would be less than significant with mitigation incorporated (see Section 3.4, *Cultural and Tribal Cultural Resources*). Alternative 2 would have lesser impacts compared to the proposed plan due to a relative decreased footprint of potential historic and other cultural and tribal cultural resources affects but not to the extent of reducing the impact significance level or not requiring mitigation (MMs CR-1 through CR-4). This alternative would meet the proposed plan objective focusing on the City vision to preserve resources.

Geology, Soils, and Mineral Resources

Under Alternative 2, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 2 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). 41.1 acres of existing "Mixed Use" throughout the City would be re-designated to "Retail Shopping" and would consist of retail shopping buildout. The General Plan area is located within an Alquist Priolo Earthquake Fault Zone. As such, development under this alternative would likely be subject to effects involving rupture of a known earthquake fault. Furthermore, the General Plan area is mostly underlain by sediments ranging from the Pleistocene to the Miocene, with the older sediments being at a higher paleontological sensitivity level. Therefore, these paleontological resources would experience ground-disturbing activity due to construction efforts resulting from this alternative, which has the potential to have an adverse impact on paleontological resource areas that have not previously been impacted. However, this alternative would require mitigation to protect paleontological resources and minimize effects related to strong ground shaking and seismic-related ground failure. Therefore, Alternative 2 geology, soils, and mineral resources impacts would be less than significant with mitigation.

The proposed plan's impacts related to geological, soil, and mineral resources would be less than significant with mitigation incorporated (see Section 3.5, *Geology, Soils, and Mineral Resources*). Alternative 2 would have a similar level of geological, soil, and mineral resource impacts compared to the proposed plan with MM GEO-1 implemented and adoption of the proposed General Plan Safety Element policies that would further minimize potential adverse effects related to strong ground shaking and seismic-related ground failure. Incorporation of the proposed plan and identified mitigation (MM GEO-1) would help this alternative meet the proposed plan objective to provide strategies and specific actions to meet the City of San Ramon's goal to outline a vision for the City's development.

Greenhouse Gas Emissions and Energy

Under Alternative 2, less a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 2 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). 41.1 acres of existing "Mixed Use" throughout the City would be re-designated to "Retail Shopping" and would consist of retail shopping buildout. Residential and commercial development would be more centralized in the DMU-S area, thus lowering the VMT per resident that in turn would lower mobile GHG emissions. In addition, construction activities and related GHG emissions would occur in order to remove office space from the re-designated DMU-S space to be replaced by new commercial, residential, and retail development. Furthermore, there would still not be a Climate Action Plan to ensure the City would meet the goals to reduce emissions to 40 percent below the 1990 levels by 2030 and reach carbon neutrality by 2045. Mitigation would be required to adopt a Climate Action Plan and adopt the California Building Energy Efficiency Standards so that the BAAQMD CEQA thresholds for GHG emissions and State energy efficiency requirements would be met. Therefore, Alternative 2 impacts related to GHG emissions and energy would be less than significant with mitigation.

The proposed plan's impacts related to GHG emissions and energy would be less than significant with mitigation (see Section 3.6, *Greenhouse Gas Emissions and Energy*). Although the impact level

of mobile GHG emissions could be lessened related to potentially lower VMT, Alternative 2 would have a similar impact level compared to the proposed plan due to the increase in construction and related GHG emissions associated with operation of residential development. Alternative 2 would also implement mitigation (MM GHG-1) to prepare an updated Climate Action Plan and adopt the California Building Energy Efficiency Standards in order to be consistent with the BAAQMD CEQA thresholds for GHG emissions and State energy efficiency requirements. Furthermore, Alternative 2 would support the proposed plan objective to assist in projects being in harmony with the overall General Plan.

Hazards, Hazardous Materials, and Wildfire

Under Alternative 2, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 2 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). 41.1 acres of existing "Mixed Use" throughout the City would be re-designated to "Retail Shopping" and would consist of retail shopping buildout. Development facilitated by Alternative 2 would result in additional population and, thus, more vehicles on the road, which could potentially increase roadway congestion and hinder evacuation routes during an emergency. Furthermore, portions of San Ramon are located in and near a High Fire Hazard Severity Zone, a Local Responsibility area, and areas of vegetated open space. However, this alternative would include mitigation conduct project design review for wildfire risk reduction to further decrease potential wildfire impacts under this alternative. Therefore, Alternative 2 impacts related to hazards, hazardous materials, and wildfire would be less than significant with mitigation.

The proposed plan's impacts related to hazards would be less than significant with mitigation (see Section 3.7, *Hazards, Hazardous Materials, and Wildfire*). Alternative 2 would have a similar impact level compared to the proposed plan due to implementation of mitigation (MM HAZ-1) to reduce wildfire risk. Alternative 2 would meet the proposed plan objective to assist City departments, other public agencies, and private developers in minimizing hazards within future project designs.

Hydrology and Water Quality

Under Alternative 2, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 2 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). 41.1 acres of existing "Mixed Use" throughout the City would be re-designated to "Retail Shopping" and would consist of retail shopping buildout. This alternative's development type would result in potential effects related to hydrology, water quality, watersheds and drainage patterns, flood and inundation hazards, and ground water resource management. However, Alternative 2 would adhere to applicable hydrology and water quality standards . Therefore, Alternative 2 impacts related to hydrology and water quality would be less than significant.

The proposed plan's impacts related to hydrology and water quality would be less than significant (see Section 3.8, *Hydrology and Water Quality*). Alternative 2 would have a similar less-than-significant impact related to hydrology and water quality due to compliance with existing water quality standards. This alternative would meet the proposed plan objective provide strategies to support the City of San Ramon's development plan, as it would implement policies to meet the most recent water quality standards.

Land Use Planning, Population, and Housing

Under Alternative 2, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 2 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). 41.1 acres of existing "Mixed Use" throughout the City would be re-designated to "Retail Shopping" and would consist of retail shopping buildout. Development facilitated by Alternative 2 would result in an increase in population (30,874 persons) that would exceed ABAG population forecasts. However, Alternative 2 would adopt the proposed 2040 General Plan Land Use and Housing Elements to accommodate for population growth and any development and incorporate mitigation to address the population growth. Therefore, Alternative 2 impacts related to land use planning, population, and housing would be less than significant with mitigation.

The proposed plan's impacts related to land use and population/housing would be less than significant (see Section 3.9, *Land Use Planning, Population, and Housing*). Alternative 2 would have an increased impact due to additional associated population compared to the proposed plan, but with required additional mitigation not to the level of change in significance level. However, this alternative would not meet the plan objectives to support the City's physical development due to the changes in development and population or the smart growth mandate.

Noise

Under Alternative 2, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 2 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). 41.1 acres of existing "Mixed Use" throughout the City would be re-designated to "Retail Shopping" and would consist of retail shopping buildout. Construction activities would occur in order to remove and replace existing office space, likely causing noise sources due to construction activities. However, associated increase in noise levels during construction potentially affecting nearby noise-sensitive receptors would be mitigated. Therefore, Alternative 2 impacts related to noise would be less than significant with mitigation.

The proposed plan's impacts related to noise would be less than significant with mitigation (see Section 3.10, *Noise*). Alternative 2 would have a greater significance level compared to the proposed plan due to the increase in construction and operational noise associated with a greater amount of residential units, but not to the extent of increasing the impact level or not requiring mitigation (MMs NOI-1 through NOI-3). This alternative would meet the proposed plan's vision to promote smart growth in terms of noise management decreasing potential effects on sensitive receptors.

Public Services and Recreation

Under Alternative 2, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 2 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). 41.1 acres of existing "Mixed Use" throughout the City would be re-designated to "Retail Shopping" and would consist of retail shopping buildout. Development under Alternative 2 would cause a population increase that would result in a higher demand for new and altered public services, such as libraries,

recreational facilities, and school services. However, adoption of the 2040 General Plan policies under Alternative 2 would implement policies that would account for additional population increase and associated increase in demand for public services. Therefore, public services and recreation impacts under Alternative 2 would be less than significant.

The proposed plan's impacts related to public services and recreation would be less than significant (see Section 3.11, *Public Services and Recreation*). Alternative 2 would have an greater impact level compared to the proposed plan due to the larger population estimate, but not to the extent of increasing the significance level or requiring mitigation. This alternative would support the proposed plan's vision focused on development that reflects the aspirations of the community.

Transportation

Under Alternative 2, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 2 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). 41.1 acres of existing "Mixed Use" throughout the City would be re-designated to "Retail Shopping" and would consist of retail shopping buildout. Alternative 2 buildout would result in VMT per capita and VMT per employee that would still exceed the impact threshold. Moreover, additional residential units and commercial development would be added to the Bishop Ranch Business Park, which would support higher density, mixed use development. The proximity of residential units to potential job opportunities would potentially lower VMT. However, even with implementation of mitigation to reduce VMT, it is possible that VMT per employee would remain above applicable thresholds. Therefore, Alternative 2 transportation impacts would be significant and unavoidable.

The proposed plan's impacts related to transportation would be significant and unavoidable (see Section 3.12, *Transportation*). Alternative 2 would have a lesser impact compared to the proposed plan due to the proximity of residential units to potential job opportunities potentially lowering VMT per resident and employee but not to the extent of reducing the impact significance level nor eliminating the need to implement mitigation (MMs TRA-1 and TRA-2). This alternative would meet the proposed plan objective to focus on smart development due to centralized development.

Utilities and Service Systems

Under Alternative 2, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 2 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). 41.1 acres of existing "Mixed Use" throughout the City would be re-designated to "Retail Shopping" and would consist of retail shopping buildout. . Increased demand for stormwater drainage, water supply, and wastewater treatment would be associated with the projected 30,874 population increase resulting from development facilitated by Alternative 2. Construction-related impacts due to potential need for new or expanded utility infrastructure and facilities would be less than significant with mitigation implemented. Therefore, Alternative 2 utilities and service systems impacts would be less than significant with mitigation.

The proposed plan's impacts related to utilities and service systems would be less than significant with mitigation (see Section 3.13, Utilities and Service Systems). Alternative 2 would have a greater impact due to the relative population increase and associated utility-related needs compared to the proposed plan, but not to the extent of increasing the impact level nor negating the need to

implement mitigation (MMs UTL-1 and UTL-2). However, this alternative would meet the proposed plan smart growth objective due to the population and related utilities demand increase being planned for with implementation of the proposed 2040 General Plan policies under this alternative.

5.6.3 Conclusion

In summary, Alternative 2 would have a similar impact level with lesser significance related to cultural resources and transportation. However, transportation impacts would remain at a significant and unavoidable impact level. In addition, land use and population impacts would be at an increased significance level, but impacts would still be less than significant. Furthermore, this alternative would also result in a similar impact level with greater significance related to noise, public services, and utilities. Aesthetics, air quality, biological resources, geological resources, wildfire risk, and hydrology/water quality impacts under Alternative 2 would have a significance level similar to the proposed plan. However, this alternative would advance the proposed plan objectives related to smart growth, promoting the City of San Ramon's vision to reflect the aspirations of the community, and protecting resources.

5.7 Alternative 3: New Infill Mixed Use within the City core Alternative

5.7.1 Description

The New Infill Mixed Use within the City Core Alternative (or Alternative 3) would adopt the 2040 General Plan, but instead re-designate approximately 130-acre portion of the Bishop Ranch Business park from "Office" to "Downtown Mixed Use – South." The purpose of the Downtown Mixed-Use, South (DMU-S) zone is to encourage an integrated transit-oriented and mixed use neighborhood, extending the activity of City Center across Bollinger Canyon Road with shops, offices, and a diversity of housing opportunities set in an urban environment of walkable streets, parks and trails. The intent is to promote a broad mix of uses which incorporates a transition of primarily commercial uses adjacent to the freeway and Bollinger Canyon Road, with residential uses located behind or above the primary commercial uses in close proximity to transportation networks. The allowed density in the DMU-S zone ranges from a minimum of 20 dwelling units per acre to a maximum of 60 dwelling units per acre. Development is generally intended to be more vertical in nature and allowance for higher density closer to the arterial roadway, with an appropriate transitional buffer adjacent to existing residential uses located to the south. Commercial uses (i.e., restaurants and retail) are encouraged along major streets. Development could be stand-alone, vertical, or horizontal mixed-use configurations. DMU-S would be a transit-oriented and mixed-use neighborhood extending the activity of City Center across Bollinger Canyon Road with commercial businesses and diverse housing opportunities. Appendix A-2 describes the allowed land uses in the DMU-S zone.

DMU-S would be a transit-oriented and mixed-use neighborhood extending the activity of City Center across Bollinger Canyon Road with commercial businesses and diverse housing opportunities. This would promote infill intensification of the City core within the large parcels that comprise the Bishop Ranch Business Park and focus solely on mixed-use buildout in the area. These parcels are located within a regional employment center, near the City Center Project, and public transit and are, thus, positioned to support higher density, mixed use development. Figure 5-2 depicts the land use updates proposed under Alternative 3.

Figure 5-2 Alternative 3 Land Use and Zoning

The existing 1.3 million square feet of office would be replaced with 125,000 square feet of new commercial uses and a residential buildout capacity of 2,900 with approximately 80 percent as multi-family unit. The 130-acre DMU-S area would allow a density range of 20 to 60 dwelling units per acre with at least 35 percent of the gross site area dedicated to circulation and open space. Future buildout would result in a net change between 2022 and 2040 of 13,055 more residential units and 827,000 less gsf of non-residential land uses. For purposes of the environmental analysis, it is assumed that the San Ramon population net change estimate from 2022 to 2040 would be 34,328, which represents a relative population increase of 8,059 compared to the proposed plan (see Table 5-1).

5.7.2 Impact Analysis

Aesthetics

Under Alternative 3, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 3 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). 1.3 million square feet of office space would be removed and replaced with 125,000 square feet of new commercial use and residential buildout. While new development would potentially create new sources of light and glare, there would be less potential compared to the proposed plan due to the decreased amount of non-residential development. Additionally, it would be unlikely for the visual character to be altered, as any development under this alternative would follow any policies that would prevent any further impacts. Therefore, Alternative 3 impacts related to aesthetics would be less than significant.

The proposed plan's impacts related to aesthetics would be less than significant (see Section 3.1, Aesthetics). Alternative 3 would have a similar level of aesthetics impact compared to the proposed plan due to the increase in residential and decrease in non-residential development having similar visual impacts on the General Plan area. However, this alternative would meet the proposed plan objective to allow City departments, other public agencies, and private developers to design projects that will enhance the character of the community, DMU-S development standards would ensure that future project designs will enhance the character of the community.

Air Quality

Under Alternative 3, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan, however 1.3 million square feet of office space would be removed. As such, there would be construction-related impacts in order to remove office space to construct and operate new commercial use, residential, and retail shopping development. Under this alternative, similar construction- and operational-related air quality emissions mitigation measures would be implemented. In addition, Alternative 3 would add more residential units and job opportunities from commercial buildout to the Bishop Ranch Business Park area, which supports higher density, mixed use development. The increased density would promote less VMT per capita that in turn would result in less operational impacts related to air quality. Therefore, Alternative 3 air quality impacts would be less than significant with mitigation.

The proposed plan's impacts related to air quality would be less than significant with mitigation (see Section 3.2, Air Quality). Alternative 3 would have a similar level of impacts compared to the proposed plan that would require available mitigation measures to prevent further construction-

related and operation-related impacts (MMs AQ-1 through AQ-4). Alternative 3 would meet the proposed plan objective to provide the basis for establishing and setting priorities for detailed plans and implementing programs that would address air quality impacts from construction and operational activities.

Biological, Agriculture, and Forestry Resources

Under Alternative 3, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 3 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). Development would be required to implement the same federal, State, and local regulations to not impact agricultural, forestry, and sensitive or special status biological resources in the area. However, development in the General Plan area could result in some potential direct or indirect impacts on nesting birds and roosting bats. As a result, the same policies and mitigation would be required for development under Alternative 3 to occur. Therefore, Alternative 3 biological, agriculture, and forestry resources impacts would be less than significant with mitigation.

The proposed plan's impacts related to biological resources would be less than significant with mitigation incorporated (see Section 3.3, *Biological, Agriculture, and Forestry Resources*). Alternative 3 would have a similar impact level on biological resources and requirement to implement mitigation (MMs BIO-1 and BIO-2) compared to the proposed plan. This alternative would achieve the proposed plan objective related to outlining a vision for the City of San Ramon's resource conservation.

Cultural and Tribal Cultural Resources

Under Alternative 3, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 3 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). This alternative would facilitate development of residential and non-residential land uses that could in turn result in ground disturbance and the conversion of existing properties and structures over 45 years of age that could be eligible for listing as a historic resource. However, this alternative would still require mitigation related to potential alteration of historic and archeological resources due to potential development. Therefore, Alternative 3 cultural and tribal resources impacts would be less than significant with mitigation.

The proposed plan's impacts related to Cultural and Tribal Resources would be less than significant with mitigation incorporated (see Section 3.4, *Cultural and Tribal Cultural Resources*). Alternative 3 would have similar impacts as the proposed plan due to a relatively similar footprint of potential historic and other cultural and tribal cultural resources affects but not to the extent of reducing the significance level or not requiring mitigation (MMs CR-1 through CR-4). This alternative would meet the proposed plan objective focusing on the City vision to preserve resources.

Geology, Soils, and Mineral Resources

Under Alternative 3, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 3 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). The General

Plan area is located within an Alquist Priolo Earthquake Fault Zone. As such, development under this alternative would likely be subject to effects involving rupture of a known earthquake fault. Furthermore, the General Plan area is mostly underlain by sediments ranging from the Pleistocene to the Miocene, with the older sediments being at a higher paleontological sensitivity level. Therefore, these paleontological resources would experience ground-disturbing activity due to construction efforts resulting from this alternative, which has the potential to have an adverse impact on paleontological resource areas that have not previously been impacted. However, this alternative would require mitigation measures to protect and minimize effects related to strong ground shaking and seismic-related ground failure. Therefore, Alternative 3 geology, soils, and mineral resources impacts would be less than significant with mitigation.

The proposed plan's impacts related to geological, soil, and mineral resources would be less than significant with mitigation incorporated (see Section 3.5, *Geology, Soils, and Mineral Resources*). Alternative 3 would have a similar level of geological, soil, and mineral resource impacts compared to the proposed plan with MM GEO-1 implemented and adoption of the proposed General Plan Safety Element policies that would further minimize potential adverse effects related to strong ground shaking and seismic-related ground failure. Incorporation of the proposed plan and identified mitigation (MM GEO-1) would help this alternative meet the proposed plan objective to provide strategies and specific actions to meet the City of San Ramon's goal to outline a vision for the City's development.

Greenhouse Gas Emissions and Energy

Under Alternative 3, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 3 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). Residential and commercial development would be more centralized in the DMU-S area, thus lowering the VMT per resident that in turn would lower mobile GHG emissions. In addition, Construction activities and related GHG emissions would occur in order to remove office space from the re-designated DMU-S space to be replaced by new commercial and residential development. Furthermore, there would still not be a Climate Action Plan to ensure the City would meet the goals to reduce emissions to 40 percent below the 1990 levels by 2030 and reach carbon neutrality by 2045. Mitigation would be required to adopt a Climate Action Plan and adopt the California Building Energy Efficiency Standards so that the BAAQMD CEQA thresholds for GHG emissions and State energy efficiency requirements would be met. Therefore, Alternative 3 impacts related to GHG emissions and energy would be less than significant with mitigation.

The proposed plan's impacts related to GHG emissions and energy would be less than significant with mitigation (see Section 3.6, *Greenhouse Gas Emissions and Energy*). Although the impact level of mobile GHG emissions could be lessened related to potentially lower VMT, Alternative 3 would have a similar impact level compared to the proposed plan due to the increase in construction and related GHG emissions associated with operation of residential development. Alternative 2 would also implement mitigation (MM GHG-1) to prepare an updated Climate Action Plan and adopt the California Building Energy Efficiency Standards in order to be consistent with the BAAQMD CEQA thresholds for GHG emissions and State energy efficiency requirements. Furthermore, Alternative 3 would support the proposed plan objective to assist in projects being in harmony with the overall General Plan.

Hazards, Hazardous Materials, and Wildfire

Under Alternative 3, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 3 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). Development facilitated by Alternative 3 would result in additional population and vehicle miles traveled in the city, which could potentially increase roadway congestion and hinder evacuation routes during an emergency. Furthermore, portions of San Ramon are located in and near a High Fire Hazard Severity Zone, a Local Responsibility area, and areas of vegetated open space. However, this alternative would include mitigation to conduct project design review for wildfire risk reduction to further decrease potential wildfire impacts under this alternative . However, due to the alternative's greater population increase compared to the proposed plan, further or altered mitigation may be required to accommodate population increase, as further population increase may have an even greater impact on evacuation routes. Therefore, Alternative 3 impacts related to hazards, hazardous materials, and wildfire would be less than significant with mitigation.

The proposed plan's impacts related to hazards would be less than significant with mitigation (see Section 3.7, *Hazards, Hazardous Materials, and Wildfire*). Alternative 3 would have a greater impact level compared to the proposed plan, but not to the extent of increasing the significance level. This is due to the relative increase in population under Alternative 3 requiring further or altered mitigation to reduce wildfire impacts to account for the population numbers that the proposed plan did not plan for. Alternative 3 would assist City departments, other public agencies, and private developers in minimizing hazards within future project designs.

Hydrology and Water Quality

Under Alternative 3, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 3 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). This alternative's development type would result in potential effects related to hydrology, water quality, watersheds and drainage patterns, flood and inundation hazards, and ground water resource management. However, Alternative 3 would adhere to applicable hydrology and water quality standards. Therefore, Alternative 3 impacts related to hydrology and water quality would be less than significant.

The proposed plan's impacts related to hydrology and water quality would be less than significant (see Section 3.8, *Hydrology and Water Quality*). Alternative 3 would have a similar less-than-significant impact related to hydrology and water quality due to compliance with existing water quality standards. This alternative would meet the proposed plan objective provide strategies to support the City of San Ramon's development plan, as it would implement policies to meet the most recent water quality standards.

Land Use Planning, Population, and Housing

Under Alternative 3, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 3 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). Development

facilitated by Alternative 3 could result in an increase in population (34,328 persons) that would exceed ABAG population forecasts. However, Alternative 3 would adopt the proposed 2040 General Plan Land Use and Housing Elements to accommodate and plan for population growth and any development and incorporate mitigation to address the population growth. Therefore, Alternative 3 impacts related to land use planning, population, and housing would be less than significant with mitigation.

The proposed plan's impacts related to land use and population/housing would be less than significant (see Section 3.9, *Land Use Planning, Population, and Housing*). Alternative 3 would have an increased impact due to additional associated population compared to the proposed plan, but with required additional mitigation not to the level of change in significance level. However, this alternative would not meet the plan objectives to support the City's physical development due to the changes in development and population or the smart growth mandate.

Noise

Under Alternative 3, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 3 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). Construction activities would occur in order to remove and replace existing office space with commercial and residential development, likely causing noise sources due to construction activities. However, associated increase in noise levels during construction potentially affecting nearby noise-sensitive receptors would be mitigated. Therefore, Alternative 3 impacts related to noise would be less than significant with mitigation.

The proposed plan's impacts related to noise would be less than significant with mitigation (see Section 3.10, Noise). Alternative 3 would have a greater significance level compared to the proposed plan due to the increase in construction and operational noise associated with a greater amount of residential units, but not to the extent of increasing the impact level or not requiring mitigation (MMs NOI-1 through NOI-3). This alternative would meet the proposed plan's vision to promote smart growth in terms of noise management decreasing potential effects on sensitive receptors.

Public Services and Recreation

Under Alternative 3, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 3 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). Development under Alternative 3 would cause a population increase that would result in a higher demand for new and altered public services, such as libraries, recreational facilities, and school services. However, adoption of the 2040 General Plan policies under Alternative 3 would implement policies that would account for additional population increase and associated increase in demand for public services. Therefore, public services and recreation impacts under Alternative 3 would be less than significant.

The proposed plan's impacts related to public services and recreation would be less than significant (see Section 3.11, *Public Services and Recreation*). Alternative 3 would have a greater impact level compared to the proposed plan due to the larger population estimate, but not to the extent of increasing the significance level or requiring mitigation. This alternative would support the proposed plan's vision focused on development that reflects the aspirations of the community.

Transportation

Under Alternative 3, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 3 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). Alternative 3 buildout would result in VMT per capita and per employee that would still exceed thresholds. Moreover, additional residential units and commercial development would be added to the Bishop Ranch Business Park, which supports higher density, mixed use development. The proximity of residential units to potential job opportunities would potentially lower VMT. However, even with implementation of mitigation to reduce VMT, it is possible that VMT per employee would remain above applicable thresholds. Therefore, Alternative 3 transportation impacts would be significant and unavoidable.

The proposed plan's impacts related to transportation would be significant and unavoidable (see Section 3.12, *Transportation*). Alternative 3 would have a lesser impact compared to the proposed plan due to the development being more centralized in the DMU-S zone, but not to the extent of reducing the impact significance level nor eliminating the need to implement mitigation (MMs TRA-1 and TRA-2). This alternative would meet the proposed plan objective to focus on smart development due to centralized multi-use development.

Utilities and Service Systems

Under Alternative 3, a greater amount of residential units and lesser amount of non-residential development would occur compared to the proposed plan. Development under Alternative 3 would be similar to the proposed plan buildout, but with 130 acres of the Bishop Ranch Business Park would be re-designated from "Office" to "Downtown Mixed Use – South" (DMU-S). Increased demand for stormwater drainage, water supply, or wastewater treatment would be associated with the projected 34,329 population increase resulting from development facilitated by Alternative 3. Construction and operational impacts due to potential need for new or expanded utility infrastructure and facilities would require mitigation. I Therefore, Alternative 3 utilities and service systems impacts would be less than significant with mitigation.

The proposed plan's impacts related to utilities and service systems would be less than significant with mitigation (see Section 3.13, Utilities and Service Systems). Alternative 3 would have a greater impact level due to the relative population increase and associated utility-related needs compared to the proposed plan, but not to the extent of increasing the significance level nor negating the need to implement mitigation (MMs UTL-1 and UTL-2). However, this alternative would meet the proposed plan smart growth objective due to the population and related utilities demand increase being planned for with implementation of the proposed 2040 General Plan policies under this alternative.

5.7.3 Conclusion

In summary, Alternative 3 would have a lesser impact related to transportation (operational-related VMT) impacts, but would not avoid the significant and unavoidable significance level. Impacts related to wildfire, noise, public services, and utilities would have a greater impact level than the proposed plan, but remain at the same significance levels as the proposed plan. However, land use and population impacts would be increased to less than significant with mitigation incorporated. Furthermore, impacts related to aesthetics, air quality, biological resources, cultural resources,

geological resources, greenhouse gas emissions, and hydrological resources would be similar to the proposed plan. As such, this alternative would satisfy the plan objective to promote the vision of the City of San Ramon's goal to reflect the aspirations of the community and protect resources. However, this alternative would struggle to support the proposed plan objective that would assist in establishing a basis for judging whether specific development and projects would be in harmony with Plan policies and standards, as the increase in residential development impacts would require further planning not anticipated by the proposed plan.

5.8 Alternatives Considered but Rejected

The following summarizes alternatives considered, but ultimately rejected for inclusion in the analysis, because they would not meet most of the proposed plan objectives, would not substantially reduce impacts compared to the proposed plan, or were determined to be infeasible.

1. The City considered a potential "Increased Residential" alternative that would increase the amount of residential buildout throughout the General Plan area beyond the City Core but eliminate some non-residential land use development as a result. Underutilized or vacant areas designated for commercial or other non-residential use would instead be designated for residential buildout. However, the proposed 2040 General Plan already meets and exceeds the RHNA requirements, meaning that an increase in residential buildout under this potential alternative would far exceed RHNA requirements beyond the need for additional residential development. This alternative would also impact non-residential development that in turn would potentially result in residents needing to drive further to access commercial goods and services that would be located outside the General Plan area. The potential alternative would also lead to additional significant impacts in other resource areas, such as operational-related Transportation impacts.
2. The City considered a potential "Reduced Residential" alternative that would entail a maximum net new residential buildout of2,000 dwelling units, a 20 percent decrease compared to the proposed plan. This potential alternative could help meet the project objective to encourage smart growth within the City. However, this reduction of residential buildout would not meet the RHNA requirements due to reduction of an appropriate buffer throughout the 2023-2031 Housing Element period to achieve the lower income RHNA, which would result in this potential alternative not meeting overall project objectives. This potential alternative would also not account for the natural increase of population and resulting housing need, resulting in additional significant impacts related to land use planning.

5.9 Environmentally Superior Alternative

CEQA Guidelines Section 15126(e)(2) requires identification of an environmentally superior alternative. If the "No Project" Alternative is environmentally superior, CEQA requires selection of the "environmentally superior alternative other than the No Project Alternative" from among the proposed plan and the alternatives evaluated.

5.9.1 Alternative Impacts and Meeting Objectives Comparison

To identify the environmentally superior alternative in accordance with the CEQA Guidelines, Table 5-2 presents a comparison of the impacts related to the alternatives and indicates whether each alternative's environmental impact is greater than, lesser than, or similar to that of the proposed plan for each of the topic areas that were analyzed.

Table 5-2 Summary of Alternatives' Impacts

Issue	Proposed Plan Impact Classification	Alternative 1 Impact Classification	Alternative 2 Impact Classification	Alternative 3 Impact Classification
Aesthetics	LTS	LTS (Greater)	LTS (Similar)	LTS (Similar)
Air Quality	LTSM	LTSM (Greater)	LTSM (Similar)	LTSM (Similar)
Biological, Agriculture, and Forestry Resources	LTSM	LTSM (Greater)	LTSM (Similar)	LTSM (Similar)
Cultural and Tribal Cultural Resources	LTSM	LTSM (Greater)	LTSM (Lesser)	LTSM (Similar)
Geology, Soils, and Mineral Resources	LTSM	LTSM (Greater)	LTSM (Similar)	LTSM (Similar)
Greenhouse Gas Emissions and Energy	LTSM	LTSM (Greater)	LTSM (Similar)	LTSM (Similar)
Hazards, Hazardous Materials, and Wildfire	LTSM	SU (Greater)	LTSM (Lesser)	LTSM (Greater)
Hydrology and Water Quality	LTS	LTS (Similar)	LTS (Similar)	LTS (Similar)
Land Use Planning, Population, and Housing	LTS	SU (Greater)	LTSM (Greater)	LTSM (Greater)
Noise	LTSM	LTSM (Similar)	LTSM (Greater)	LTSM (Greater)
Public Services and Recreation	LTS	LTS (Lesser)	LTS (Greater)	LTS (Greater)
Transportation	SU	SU (Greater)	SU (Lesser)	SU (Lesser)
Utilities and Service Systems	LTS	LTSM (Lesser)	LTSM (Greater)	LTSM (Greater)

Notes: NI = No Impact; LTS = Less than Significant; LTSM = Less than Significant with Mitigation; SU = Significant and Unavoidable

Alternative 1 Comparison to Proposed Plan Summary

The Adopted General Plan Buildout Alternative would generally result in greater impacts compared to the proposed plan (see Table 5-2). By not having any planned policies for addressing wildfire risk, GHG emissions, and additional housing needs, compared to the proposed plan, Alternative 1 would result in greater impacts in these resource areas, with hazards and housing increased to a level of significant and unavoidable. By not having as many planned or operational activities compared to the proposed plan, Alternative 1 would result in lesser impacts related to public services and recreation as well as utilities and service systems. Alternative 1 would have similar impact levels compared to the proposed plan related to biological, agricultural, and forestry resources, hydrological resources, and noise. Impacts related to aesthetics, air quality, cultural resources, geological resources, and transportation would be greater compared to the proposed plan but not the level of change in significance. However, Alternative 1 would not meet the plan's objectives, as

it would not increase the residential and community opportunities or facilitate identified needed development in the proposed General Plan area, thus not meeting the current RHNA. It would also not incorporate any of the mitigation or preventative measures that the proposed plan would incorporate.

Alternative 2 Comparison to Proposed Plan Summary

The New Infill Mixed Use within the City Core and Additional Retail Shopping Alternative would generally result in overall similar environmental impacts compared to the proposed plan (see Table 5-2). By decreasing 130-acre office use area for residential and retail use in the DMU-S zone and reducing residential uses on 41.4-acres throughout the City by re-designating from "Mixed Use" to "Retail Shopping", development would be more centralized and result in lesser impacts related to cultural resources, wildfire risk, and transportation. However, due to the increase in population and construction for demolition, Alternative 2 would result in greater impacts related to land use, noise, public services/recreation, and utilities. Overall, this alternative would advance the proposed plan objectives to outline a vision for San Ramon's long-range physical and economic development and resource conservation that reflects the aspirations of the community and the smart growth mandate.

Alternative 3 Comparison to Proposed Plan Summary

The New Infill Mixed Use within the City Core Alternative would generally result in overall similar environmental impacts compared to the proposed plan (see Table 5-2). Alternative 3 would result in lesser impacts related to transportation. However, due to the increase in residential development and thus availability, Alternative 3 would result in greater impacts related to wildfire risk, land use planning, noise, public services/recreation, and utilities. This alternative would advance the proposed plan objective to assist in outline the City of San Ramon's vision that reflects the aspirations of the community. However, Alternative 3 would not fully assist in providing a basis for establishing and setting priorities for detailed plans and programs, as further mitigation measures and policies would be required.

5.9.2 Identification of Environmentally Superior Alternative

The New Infill Mixed Use within the City Core and Additional Retail Shopping Alternative (Alternative 2) would result in reduced impacts compared to the New Infill Mixed Use within the City Core Alternative (Alternative 3), as Alternative 3 would result in greater impacts related to wildfires and public services, although not to the extent of increasing the significance level, due to the 8,059 population increase under Alternative 3 compared to the proposed plan versus the 4,605 population increase under Alternative 2 compared to the proposed plan. Comparatively, while most Alternative 3 impacts are similar in significance to the proposed plan but would not meet some plan objectives, Alternative 2 would also meet more proposed plan objectives in comparison as well as result in a lesser impact related to cultural resources, although not to the extent of reducing the significance level. In addition, while some of the proposed plan objectives would be met under Alternative 3, comparatively Alternative 2 would further advance project objectives to outline a vision for San Ramon's long-range physical and economic development and resource conservation that reflects the aspirations of the community and the smart growth mandate.

Overall, of the alternatives evaluated in this EIR chapter, the New Infill Mixed Use within the City Core and Additional Retail Shopping Alternative (Alternative 2) would be the environmentally superior alternative.

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6 Contributors and Preparers

6.1 EIR Contributors

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East Bay Municipal Utility District

Kathryn Horn, Community Affairs

Pacific Gas and Electric

Michael Bragen, Agency Liaison

6.2 EIR Preparers

This EIR was prepared by the City of San Ramon, with the assistance of Rincon Consultants, Inc. Consultant staff involved in the preparation of the EIR and associated transportation impact assessment (TIA) technical study staff listed below.

RINCON CONSULTANTS, INC. (EIR PREPARER)

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Ashlyn Brookshire, Transportation Planner
Bruno Lertora, Transportation Planner
Kayla Gonzalez, Transportation Planner

Appendix A-1

Notice of Preparation and Scoping Comments

NOTICE OF PREPARATION AND SCOPING MEETING

Environmental Impact Report for the San Ramon General Plan 2040 and Climate Action Plan Update

Date: Friday, June 24, 2022

To: Reviewing Agencies, Organizations, and Interested Parties

Subject: Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the San Ramon General Plan 2040 and Climate Action Plan (CAP) Update (GPA 2021-0001) as well as Notice of EIR Scoping Meeting on Tuesday, July 5, 2022.

The City of San Ramon (City), as the lead agency under the California Environmental Quality Act (CEQA), is preparing a General Plan Amendment (GPA 2021-0001) to update all General Plan Elements, including the Housing Element, and update the Climate Action Plan (CAP) to guide growth and development through 2040. The City has determined that preparation of a programmatic EIR is necessary to evaluate potential environmental impacts of the General Plan 2040 and CAP Update pursuant to the California Environmental Quality Act (CEQA). The City is the CEQA Lead Agency and is requesting input on the scope of the EIR from responsible and trustee agencies, interested public agencies and organizations, and the general public (pursuant to CEQA Guidelines Section 15082).

This NOP provides a summary of the plans, the City's preliminary identification of the potential environmental issues to be analyzed in the programmatic EIR; and information on how to comment on the scope of the EIR. This NOP and background documents associated with the General Plan 2040 and CAP Update are available for review on the San Ramon General Plan 2040 and CAP Update webpage at: https://www.sanramon.ca.gov/ and https://plansanramon.com/.

EIR NOP Public Review Period: June 24, 2022 to July 25, 2022

The City requests your review and consideration of this notice and invites input and comments from interested agencies, persons, and organizations regarding the preparation of the General Plan 2040 and CAP Update EIR. Comments in response to this notice must be in writing and submitted to the Lead Agency Contact below by **5:00 p.m. on Monday, July 25, 2022**. If applicable, please indicate a contact person for your agency or organization.

NOP Written Comments: Comments must be submitted via mail or email with "NOP Comments: San Ramon General Plan 2040 + CAP Update EIR" in the subject line and the name and physical address of the commenter in the body of the comment to the Lead Agency Contact at the following address or e-mail by **5:00 p.m. on Monday, July 25, 2022**:

Cindy M. Yee, AICP, Senior Planner
San Ramon Planning Services Division
7000 Bollinger Canyon Road, San Ramon, CA 94583
Planning@sanramon.ca.gov

EIR Public Scoping Meeting: The City of San Ramon Planning Commission will hold a public EIR scoping meeting commencing at **7:00 p.m. on Tuesday, July 5, 2022 in the City Hall Council Chambers located at 7000 Bollinger Canyon Road**. The full meeting agenda with instructions to view or participate via teleconference or in person will be available online at least 72 hours prior to the meeting at www.sanramon.ca.gov/meeting under the July 5, 2022 event date. The Public EIR scoping meeting will provide an opportunity for agency staff and interested members of the public to submit verbal comments on the scope of the environmental issues to be addressed in the EIR. **No decisions concerning the proposed plans will be made at this meeting.**

Plans Location: The San Ramon General Plan 2040 and CAP Update encompass the entirety of the City of San Ramon. Figure 1 shows the regional location, and Figure 2 shows both the San Ramon General Plan 2040 boundary (the Planning Area) and the CAP Update boundary (City limits).

Proposed Plans: The General Plan Amendment would entail two plans: 1) the General Plan 2040 and 2) the CAP Update. The General Plan 2040 would serve as a long-term framework for future growth, establish the City's eight-year housing plan from 2023 to 2031, reflect issues identified from community input and changes in State law, and update all elements of the General Plan including the Housing, Economic Development, Growth Management, Land Use, Traffic and Circulation, Parks and Recreation, Public Facilities and Utilities, Open Space and Conservation, Safety, Noise, and Air Quality and Greenhouse Gas Elements. The update to the General Plan would include, but is not limited to, addition of Environmental Justice policies, revisions to policies, narratives, data, and figures to reflect the new buildout period. The CAP Update would quantify existing greenhouse gas (GHG) emissions and projected emissions associated with estimated community growth, set reduction goals and timelines for community emissions, develop and quantify reduction measures and actions to achieve the emissions reduction goals, and establish a framework for monitoring emissions levels.

EIR Environmental Impact Areas: The EIR will provide a programmatic evaluation of potential environmental impacts of the plans. The EIR also will evaluate the cumulative impacts of the plans when considered in conjunction with other related past, present, and reasonably foreseeable future projects. The City anticipates that the plans could result in potentially significant environmental impacts with regard to the following topic areas, which will be further evaluated in the EIR.

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

EIR Project Alternatives: The EIR will also evaluate a reasonable range of plan alternatives that could reduce or avoid potential environmental effects identified in the EIR, including a required "No Plans" Alternative.

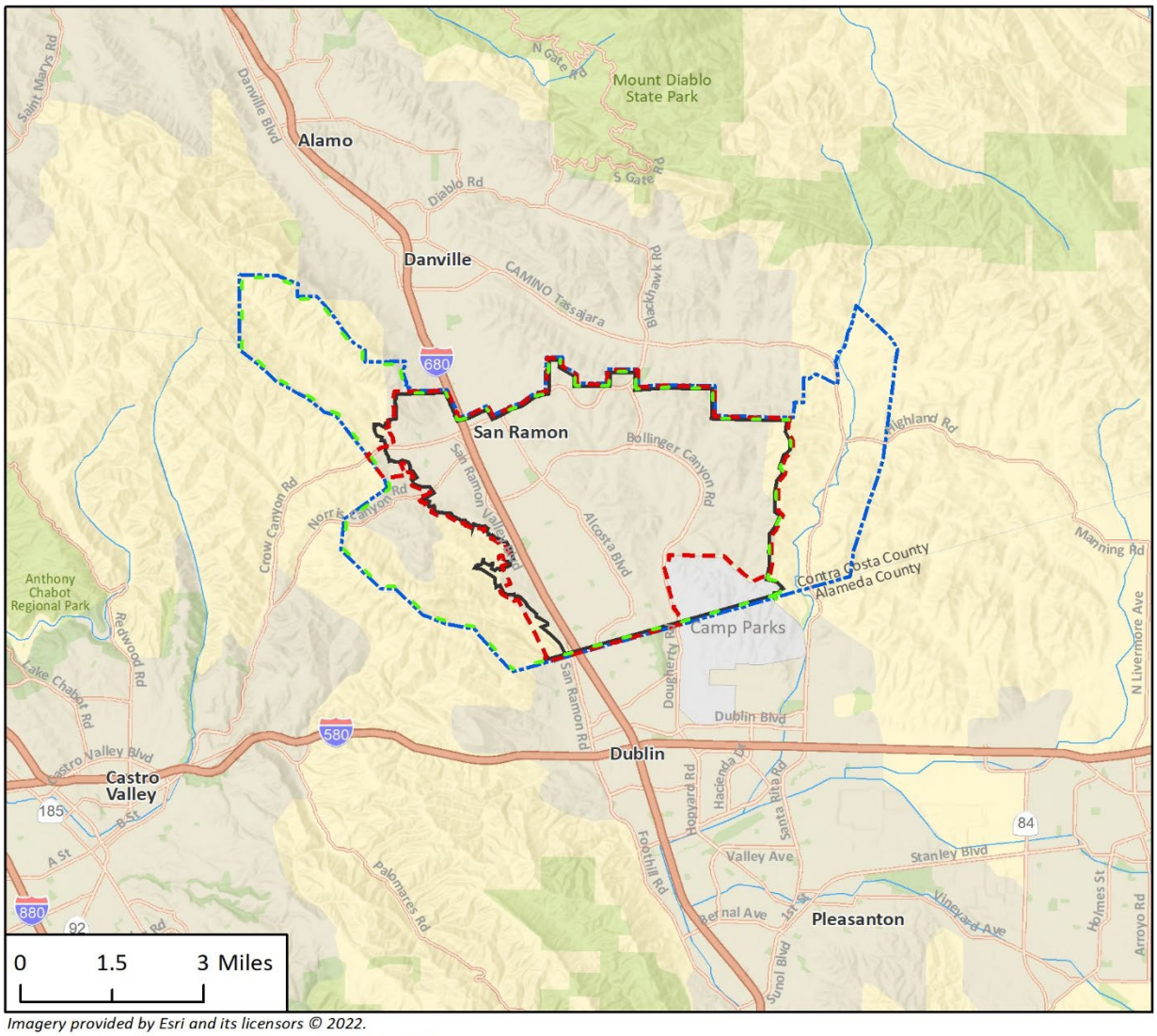
When the Draft EIR is completed, it will be available for review at City offices located at 7000 Bollinger Canyon Road, San Ramon, CA 94583 and online at: https://www.sanramon.ca.gov/. The City will issue a Notice of Completion and Notice of Availability of a Draft EIR at that time to inform the public and interested agencies, groups, and individuals regarding how to access the Draft EIR and provide comments. Additional information about the proposed plans can be accessed at the https://plansanramon.com/ webpage and the City website at https://www.sanramon.ca.gov/.

If you have questions regarding this NOP or the EIR public scoping meeting, please contact the Lead Agency Contact, Cindy Yee, at (925) 973-2562 or via email at Planning@sanramon.ca.gov.

Debbie Chamberlain, Community Development Dept. Director

6/17/2022
Date

Figure 1 Regional Location



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Diablo, Dublin and Las Trampas Ridge quadrangles and T02S R01W S01-05, 08-17, 22-27,35 & T02S R01E S06-09,17-20.

City Limits (CAP Update Boundary)
Planning Area (General Plan 2040 Boundary)
Sphere of Influence
Urban Growth Boundary
N

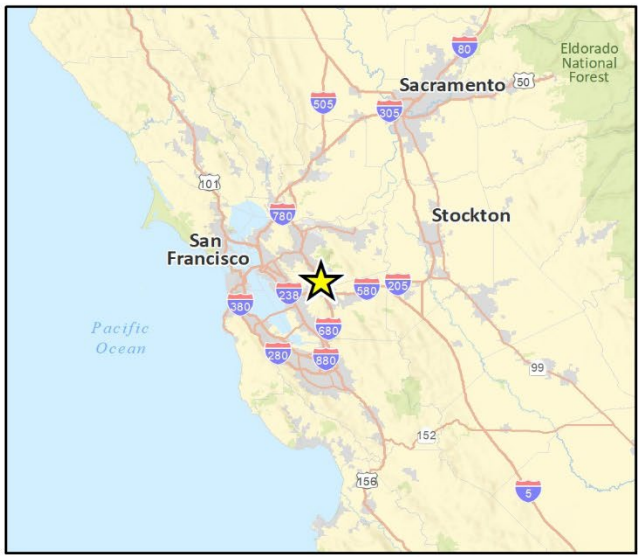
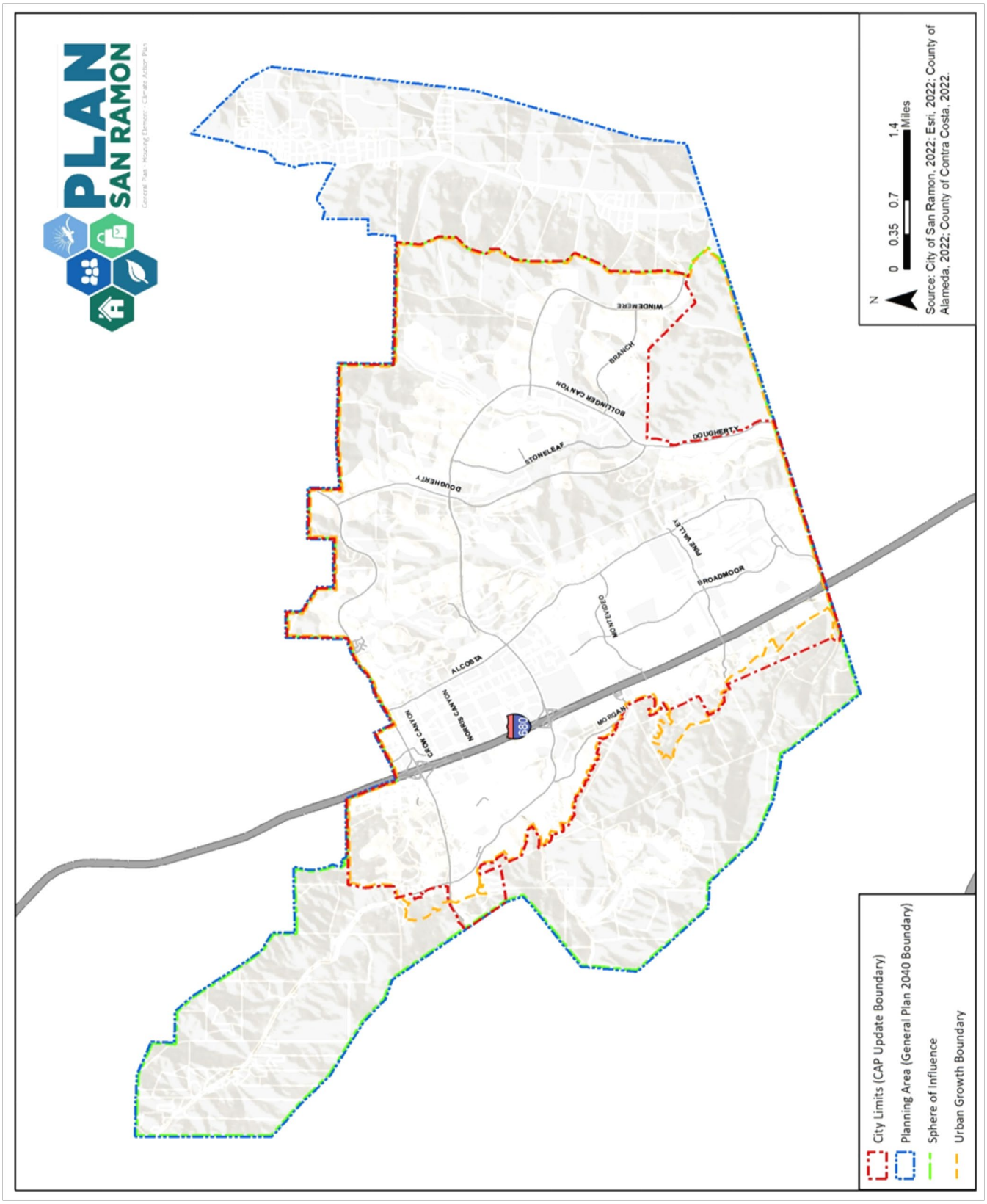


Figure 2 General Plan 2040 and CAP Update Boundaries



NATIVE AMERICAN HERITAGE COMMISSION

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June 24, 2022

Cindy M. Yee, AICP, Senior Planner
City of San Ramon
7000 Bollinger Canyon Road
San Ramon Planning Services Division
San Ramon, CA 94583

Re: 2022060549, San Ramon General Plan 2040 and Climate Action Plan Update Project, Contra Costa County

Dear Ms. Yee:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.

b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Cody.Campagne@nahc.ca.gov.

Sincerely,

Cody Campagne

Cody Campagne
Cultural Resources Analyst

cc: State Clearinghouse

EAST BAY
MUNICIPAL UTILITY DISTRICT

July 13, 2022

Cindy M. Yee, AICP, Senior Planner
San Ramon Planning Services Division
City of San Ramon
7000 Bollinger Canyon Road
San Ramon, CA 94583

Re: Notice of Preparation of an Environmental Impact Report for the San Ramon General Plan 2040 and Climate Action Plan (CAP) Update, (GPA 2021-0001), San Ramon

Dear Ms. Yee:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the San Ramon General Plan 2040 and Climate Action Plan (CAP) Update, which encompasses the entire City of San Ramon (City). EBMUD has the following comments.

WATER SERVICE

Effective January 1, 2018, water service for new multi-unit structures shall be individually metered or sub-metered in compliance with California State Senate Bill 7 (SB-7). SB-7 encourages conservation of water in multi-family residential, mixed-use multi-family and commercial buildings through metering infrastructure for each dwelling unit, including appropriate water billing safeguards for both tenants and landlords. EBMUD water services shall be conditioned for all development projects within the General Plan and CAP Update that are subject to SB-7 requirements and will be released only after the project sponsor has satisfied all requirements and provided evidence of conformance with SB-7.

Main extensions that may be required to serve any specific developments within the General Plan and CAP Update to provide adequate domestic water supply, fire flows, and system redundancy will be at the project sponsor's expense. Pipeline and fire hydrant relocations and replacements due to modifications of existing streets, and off-site pipeline improvements, also at the project sponsor's expense, may be required depending on EBMUD metering requirements and fire flow requirements set by the local fire department. When the development plans are finalized for individual projects within the General Plan and CAP Update, project sponsors for individual projects should contact EBMUD's New Business Office and request a water service estimate to determine costs and conditions of providing water service to the development. Engineering and installation

of new and relocated pipelines and services require substantial lead time, which should be provided for in the project sponsor's development schedule.

Project sponsors for individual projects within the General Plan and CAP Update should be aware that EBMUD will not install piping or services in contaminated soil or groundwater (if groundwater is present at any time during the year at the depth piping is to be installed) that must be handled as a hazardous waste or that may be hazardous to the health and safety of construction and maintenance personnel wearing Level D personal protective equipment. Nor will EBMUD install piping or services in areas where groundwater contaminant concentrations exceed specified limits for discharge to the sanitary sewer system and sewage treatment plants. The project sponsor must submit copies to EBMUD of all known information regarding soil and groundwater quality within or adjacent to the project boundary and a legally sufficient, complete, and specific written remediation plan establishing the methodology, planning and design of all necessary systems for the removal, treatment, and disposal of contaminated soil and groundwater.

EBMUD will not design piping or services until soil and groundwater quality data and remediation plans have been received and reviewed and will not start underground work until remediation has been carried out and documentation of the effectiveness of the remediation has been received and reviewed. If no soil or groundwater quality data exists, or the information supplied by the project sponsor is insufficient, EBMUD may require the project sponsor to perform sampling and analysis to characterize the soil and groundwater that may be encountered during excavation, or EBMUD may perform such sampling and analysis at the project sponsor's expense. If evidence of contamination is discovered during EBMUD work on the project site, work may be suspended until such contamination is adequately characterized and remediated to EBMUD standards.

WATER RECYCLING

EBMUD's Policy 9.05 requires that customers use non-potable water, including recycled water, for non-domestic purposes when it is of adequate quality and quantity, available at reasonable cost, not detrimental to public health, and not injurious to plant, fish, and wildlife to offset demand on EBMUD's limited potable water supply.

Some portions of the City's boundaries fall within and around the service area of the Dublin San Ramon Services and EBMUD Recycled Water Authority (DERWA) and EBMUD's San Ramon Valley's Recycled Water Project transmission and distribution pipeline infrastructure. Although the housing element is residential in nature, many City projects and related non-residential and recreational developments present opportunities for recycled water uses. Appropriate recycled water uses range from landscape irrigation, toilet flushing, cooling, and other non-potable commercial and industrial applications. These could be served by existing or expanded recycled water pipelines in the future.

In 2019, DERWA and the participating agencies implemented a moratorium on new recycled water connections in the City, until additional wastewater sources are secured that

can be utilized to expand the treatment and service of recycled water within the San Ramon Valley Region. Therefore, as EBMUD advances plans and implements its recycled water supply expansion to the City, EBMUD requires the City and project sponsors coordinate closely with EBMUD and provide an estimate of expected water demand for potential recycled water uses for each specific project during the planning of the various General Plan CAP Update components to allow EBMUD to further explore the options and requirements relating to recycled water use. Accordingly, EBMUD will assess and consider the feasibility of providing recycled water to the project area for appropriate uses.

WATER CONSERVATION

Individual projects within the General Plan and CAP Update presents an opportunity to incorporate water conservation measures. EBMUD requests that the City include in its conditions of approval a requirement that the project sponsor comply with Assembly Bill 325, "Model Water Efficient Landscape Ordinance," (Division 2, Title 23, California Code of Regulations, Chapter 2.7, Sections 490 through 495). The project sponsors should be aware that Section 31 of EBMUD's Water Service Regulations requires that water service shall not be furnished for new or expanded service unless all the applicable water-efficiency measures described in the regulation are installed at the project sponsor's expense.

If you have any questions concerning this response, please contact Timothy R. McGowan, Senior Civil Engineer, Major Facilities Planning Section at (510) 287-1981.

Sincerely,

David J. Rehnstrom
Manager of Water Distribution Planning

DJR:KTL:grd
sb22_148 San Ramon General Plan and Climate Action Update NOP Response

Department of Toxic Substances Control

Meredith Williams, Ph.D., Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Jared Blumenfeld
Secretary for
Environmental Protection

Gavin Newsom
Governor

SENT VIA ELECTRONIC MAIL

July 25, 2022

Ms. Cindy M. Yee, AICP
Senior Planner
San Ramon Planning Services Division
7000 Bollinger Canyon Road
San Ramon, CA 94583
Planning@sanramon.ca.gov

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR THE SAN RAMON GENERAL PLAN 2040 AND CLIMATE ACTION PLAN UPDATE (GPA 2021-0001) – DATED JUNE 2022
(STATE CLEARINGHOUSE NUMBER: 2022060549)

Dear Ms. Yee:

The Department of Toxic Substances Control (DTSC) received a Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the San Ramon General Plan 2040 and Climate Action Plan (CAP) Update (GPA 2021-0001) (Project). The Lead Agency is receiving this notice from DTSC because the Project includes one or more of the following: groundbreaking activities, work in close proximity to a roadway, work in close proximity to mining or suspected mining or former mining activities, presence of site buildings that may require demolition or modifications, importation of backfill soil, and/or work on or in close proximity to an agricultural or former agricultural site.

DTSC notes that if the Hazards and Hazardous Materials section of the EIR will propose to identify hazardous waste facilities and sites by utilizing the listing compiled in accordance with California Government Code Section 65962.5, commonly known as the Cortese List, not all sites impacted by hazardous waste or hazardous materials may be found on the List. DTSC recommends that the Hazards and Hazardous Materials section of the EIR address actions to be taken for any sites impacted by hazardous waste or hazardous materials within the Project area, not just those found on the Cortese List. DTSC recommends consulting with other agencies that may provide oversight to hazardous waste facilities and sites in order to determine a comprehensive

listing of all sites impacted by hazardous waste or hazardous materials within the Project area. DTSC hazardous waste facilities and sites with known or suspected contamination issues can be found on DTSC's EnviroStor data management system. The EnviroStor Map feature can be used to locate hazardous waste facilities and sites for a county, city, or a specific address. A search within EnviroStor indicates that numerous hazardous waste facilities and sites are present within the Project's region.

DTSC recommends that the following issues be evaluated in the Hazards and Hazardous Materials section of the EIR:

1. The EIR should acknowledge the potential for historic or future activities on or near the Project site to result in the release of hazardous wastes/substances on the Project site. In instances in which releases have occurred or may occur, further studies should be carried out to delineate the nature and extent of the contamination, and the potential threat to public health and/or the environment should be evaluated. The EIR should also identify the mechanism(s) to initiate any required investigation and/or remediation and the government agency who will be responsible for providing appropriate regulatory oversight.

2. Refiners in the United States started adding lead compounds to gasoline in the 1920s in order to boost octane levels and improve engine performance. This practice did not officially end until 1992 when lead was banned as a fuel additive in California. Tailpipe emissions from automobiles using leaded gasoline contained lead and resulted in aerially deposited lead (ADL) being deposited in and along roadways throughout the state. ADL-contaminated soils still exist along roadsides and medians and can also be found underneath some existing road surfaces due to past construction activities. Due to the potential for ADL-contaminated soil, DTSC recommends collecting soil samples for lead analysis prior to performing any intrusive activities for the Project described in the EIR.

3. If any sites within the Project area or sites located within the vicinity of the Project have been used or are suspected of having been used for mining activities, proper investigation for mine waste should be discussed in the EIR. DTSC recommends that any Project sites with current and/or former mining operations onsite or in the Project site area should be evaluated for mine waste according to DTSC's 1998 Abandoned Mine Land Mines Preliminary Assessment Handbook.

4. If buildings or other structures are to be demolished on any project sites included in the proposed project, surveys should be conducted for the presence of lead-based paints or products, mercury, asbestos containing materials, and polychlorinated biphenyl caulk. Removal, demolition and disposal of any of the

above-mentioned chemicals should be conducted in compliance with California environmental regulations and policies. In addition, sampling near current and/or former buildings should be conducted in accordance with *DTSC's 2006 Interim Guidance Evaluation of School Sites with Potential Contamination from Lead Based Paint, Termiticides, and Electrical Transformers*.

5. If any projects initiated as part of the proposed Project require the importation of soil to backfill any excavated areas, proper sampling should be conducted to ensure that the imported soil is free of contamination. DTSC recommends the imported materials be characterized according to *DTSC's 2001 Information Advisory Clean Imported Fill Material*.

6. If any sites included as part of the proposed Project have been used for agricultural, weed abatement or related activities, proper investigation for organochlorinated pesticides should be discussed in the EIR. DTSC recommends the current and former agricultural lands be evaluated in accordance with DTSC's 2008 *Interim Guidance for Sampling Agricultural Properties (Third Revision)*.

DTSC appreciates the opportunity to comment on the EIR. Should you need any assistance with an environmental investigation, please visit DTSC's Site Mitigation and Restoration Program page to apply for lead agency oversight. Additional information regarding voluntary agreements with DTSC can be found at DTSC's Brownfield website.

If you have any questions, please contact me at (916) 255-3582 or via email at Brian.McAloon@dtsc.ca.gov.

Sincerely,

Brian McAloon
Project Manager
Site Evaluation and Remediation Unit
Site Mitigation and Restoration Program
Department of Toxic Substances Control

cc: (via email)

Governor's Office of Planning
and Research
State Clearinghouse
State.Clearinghouse@opr.ca.gov

Mr. Dave Kereazis
Office of Planning & Environmental Analysis
Department of Toxic Substances Control
Dave.Kereazis@dtsc.ca.gov

Appendix A-2

Draft Zoning Ordinance and Maps

City of San Ramon

DRAFT

Zoning Ordinance

August 2023

Division D2 – Allowable Land Uses and Zoning Standards

Chapter XX

New Mixed-Use Zones (Draft)

New Mixed-Use Zones

New Mixed-Use Zone Land Uses and Permit Requirements

A. **Allowable Land Uses and Permit Requirements.** Table 1 (Allowed Land Uses and Permit Requirements for New Mixed-Use Zones) identifies the uses of land allowed by this Zoning Ordinance in the Mixed-Use Zones, and the land use permit required to establish each use

B. **Specific Use Regulations.** Where the last column in the table ("Specific Use Regulations") includes a section number, the regulations in the referenced section apply to the use. Provisions in other sections of the Zoning Ordinance may also apply.

Table 1

Allowed Land Uses and Permit Requirements for New Mixed-Use Zones

Key:	P = Allowed by Right (Zoning Clearance may be required) MUP = Minor Use Permit required UP = Conditional Use Permit required S = Permit requirement set by Specific Use Regulation ZC = Zoning Clearance required (–) = Not Allowed				
Land Use (1)	**Permit Required**				**Specific Use Regulations**
	MUX	**MUR**	**DMU-N**		
Media Production	ZC(3)	ZC(3)	ZC(3)		
Recycling Facility	—	—	—		
Research and Development, General	MUP	MUP	MUP		
Research and Development, Limited	ZC(3)	ZC(3)	ZC(3)		
Laboratory, Non-Medical	MUP	MUP	MUP		
Commercial Recreation Facility – Indoor	UP	UP	UP		D4-30
Conference/Convention Facility	UP	UP	UP		
Fitness/Health Facility	UP	UP	UP		
Library, Museum, Gallery (non-retail gallery)	P	P	P		
Meeting Facility, Public or Private	MUP	MUP	MUP		
Night Club	MUP	MUP	MUP		
Park and Recreation Facility – Site of 2 acres or less	P	P	P		
School – Public or Private	UP	UP	UP		
School – Specialized Education or Training	MUP	MUP	MUP		
Sports and Entertainment Assembly Facility	UP	UP	UP		
Studio – Art, Dance, Martial Arts, Music, etc. (ground floor)	ZC(3)	ZC(3)	ZC(3)		
Studio – Art, Dance, Martial Arts, Music, etc. (upper floor)	P	P	P		

Table 1

Allowed Land Uses and Permit Requirements for New Mixed-Use Zones

Key:	P = Allowed by Right (Zoning Clearance may be required) MUP = Minor Use Permit required UP = Conditional Use Permit required S = Permit requirement set by Specific Use Regulation ZC = Zoning Clearance required (–) = Not Allowed				
Land Use (1)	**Permit Required**				**Specific Use Regulations**
	MUX	**MUR**	**DMU-N**		
Theater, Movies, or Performing Arts	UP	UP	UP		
Animal – Wild or Exotic	S	S	S		Municipal Code Div. B2
Animal – Domestic	P	P	P		
Emergency Shelter	P	P	P		
Home Occupation	S	S	S		
Live/Work Unit	MUP	MUP	MUP		
Mixed-Use Project with Residential Component	P	P	P		
Supportive Housing	UP	UP	UP		
Transitional Housing	UP	UP	UP		
Residential Care, 6 or fewer	P	P	P		
Residential Care, 7 or more	MUP	MUP	MUP		
Retail Trade					
Accessory Retail and Services	P	P	P		
Alcoholic Beverage Manufacturing, Micro-Brewery	UP	UP	UP		
Auto and Vehicle Sales and Rental	MUP(4)	MUP(4)	MUP(4)		
Building/Landscape Materials Sales – Indoor Showroom	UP	UP	UP		
Convenience Store	P	P	P		
Drive-through Retail	UP	UP	UP		
Eating and Drinking Establishments	P	P	P		
With wine and beer	P	P	P		
With full alcoholic beverage service	MUP	MUP	MUP		
Alcoholic Beverage Manufacturing, Brew Pub	P	P	P		
With drive-through service	MUP	MUP	MUP		
With live entertainment	MUP	MUP	MUP		D4-34
With up to 12 outdoor seats or stools	P	P	P		
With 13 or more outdoor seats or stools	MUP	MUP	MUP		
Farmer's Market – Ongoing	MUP	MUP	MUP		
Food and Beverage Sales – Chain Grocery	P	P	P		
Food and Beverage Sales – Specialty Food Store	P	P	P		
Furniture, Furnishings, and Appliance Store	P(5)	P(5)	P(5)		
Mobile Home, Boat, or RV Sales	—	—	—		
Outdoor Retail Sales and Activities	MUP	MUP	MUP		D4-35
Outdoor Vendor	MUP	MUP	MUP		D4-35
Pharmacy, Medical Supplies	P	P	P		

Table 1

Allowed Land Uses and Permit Requirements for New Mixed-Use Zones

Key:	P = Allowed by Right (Zoning Clearance may be required) MUP = Minor Use Permit required UP = Conditional Use Permit required S = Permit requirement set by Specific Use Regulation ZC = Zoning Clearance required (–) = Not Allowed				
Land Use (1)	**Permit Required**				**Specific Use Regulations**
	MUX	**MUR**	**DMU-N**		
Retail, General – 50,000 sf or less of floor area	P	P	P		
Retail, general – Over 50,000 sf of floor area	P	P	P		
Secondhand Store	MUP	MUP	MUP		
ATM	P	P	P		
Bank, Financial Services	P	P	P		
Business Support Service	P	P	P		
Medical Services – Clinic, Laboratory, Urgent Care (ground floor)	MUP(3)	UP(3)	UP(3)		
Medical Services – Clinic, Laboratory, Urgent Care (upper floors)	MUP	MUP	MUP		
Medical Services – Doctor Office (ground floor)	P(2)	P(2)	P(2)		
Medical Services – Doctor Office (upper floors)	P(2)	P(2)	P(2)		
Medical Services – Extended Care	UP	UP	UP		
Office – Accessory	P	P	P		
Office – Business/Service (ground floor)	P	P	P		
Office – Business/Service (upper floors)	P	P	P		
Office – Government (ground floor)	P	P	P		
Office – Government (upper floors)	P	P	P		
Office – Processing (ground floor)	MUP	MUP	MUP		
Office – Processing (upper floors)	MUP	MUP	MUP		
Office - Professional/Administrative (ground floor)	P	P	P		
Office - Professional/Administrative (upper floors)	P	P	P		
Adult Day Care	UP	UP	UP		
Animal Services – Boarding/Training	MUP	MUP	MUP		
Animal Services – Grooming	ZC(3)	ZC(3)	ZC(3)		
Animal Services – Veterinary Clinic, Animal Hospital	MUP	MUP	MUP		
Catering Service	MUP(3)	MUP(3)	MUP(3)		
Child Day Care Center	UP	UP	UP		
Child Day Care Center – Accessory to on-site anchor tenant	UP	UP	UP		
Child Day Care – Small family day care home	P	P	P		
Lodging – Bed & Breakfast Inn (B&B)	UP	UP	UP		D4-27
Lodging – Hotel or Motel	UP	UP	UP		
Personal Services	ZC(3)	ZC(3)	ZC(3)		

Table 1

Allowed Land Uses and Permit Requirements for New Mixed-Use Zones

Key:	P = Allowed by Right (Zoning Clearance may be required) MUP = Minor Use Permit required UP = Conditional Use Permit required S = Permit requirement set by Specific Use Regulation ZC = Zoning Clearance required (–) = Not Allowed				
Land Use (1)	**Permit Required**				**Specific Use Regulations**
	MUX	**MUR**	**DMU-N**		
Public Safety Facility	P	P	P		
Broadcasting Studio	MUP	MUP	MUP		
Cogeneration Facility	UP	UP	UP		
Heliport	UP	UP	UP		
Parking Facility, Public or Commercial	UP	UP	UP		
Transit Station	P	P	P		
Utility Facility	UP	UP	UP		
Utility Infrastructure	P	P	P		
Wireless Telecommunications Facility	S	S	S		

Footnotes:

(1) See division D8 for land use definitions.

(2) Use allowed only if it does not exceed 10% of the total office space on the site.

(3) Use allowed with a Minor Use Permit or Zoning Clearance, as identified in the table above, on ground floor if non-retail uses occupy 25% or less of the gross ground floor area. Non-retail uses exceeding 25% gross ground floor area may be authorized by a Minor Use Permit when the economic findings in Section D4-38 Non-Retail Uses within Retail/Commercial Centers can be made.

(4) Limited to an auto rental agency accessory to a hotel or retail sales/showroom.

(5) Allowed only as accessory to department store.

New Mixed-Use Zone General Development Standards

Subdivisions, new land uses and structures, and alterations to existing land uses and structures, shall be designed, constructed, and/or established in compliance with the requirements in Table 2 (New Mixed-Use Zone Development standards), in addition to the applicable development standards (e.g., landscaping, parking, and loading, etc.) in Division D3 of this Zoning Ordinance.

Table 2
New Mixed-Use Zone Development Standards

Development Feature	Requirement by Zone			
	MUX	**MUR**	**DMU-N**	
Minimum Lot Size	*The minimum area and width for parcels proposed in new subdivisions.*			
Area (net)	Determined through subdivision process			
Width	Determined through subdivision process			
Depth	Determined through subdivision process			
Residential Density	*Minimum site area per dwelling unit as determined by the General Plan. The actual number of units allowed will be determined through subdivision or land use permit approval.*			
Minimum Density (du/ac)	20	20	20	
Maximum Density (du/ac)	40	40	60	
Floor Area Ratio (FAR)	*The measurement of a structure's floor area in relation to the size of the lot that the structure(s) is located on. FAR is expressed as a decimal number and is derived by dividing the total net area of the structure(s) by the total area of the lot (structure area ÷ lot area).*			
Sitewide Minimum	0.70	0.70	1.25	
Sitewide Maximum	2.0	2.0	2.75	
Nonresidential Minimum	0.45	N.A.	N.A.	
Residential Minimum	N.A.	0.5	N.A.	
Setbacks (1)	*Minimum setbacks required. See Section D3-10 for exceptions, and allowed projections into setbacks.*			
Front	10 feet			
Side – Interior (each)	Determined through project review and approval			
Side – Corner	Determined through project review and approval			
Rear	Determined through project review and approval			
Accessory Structure	See Section D4-26 (Accessory Structures)			
Lot Coverage	*The maximum percentage of total lot area that may be covered by structures.*			
Maximum	N.A.	N.A.	N.A.	

Table 2

New Mixed-Use Zone Development Standards

Development Feature	Requirement by Zone			
	MUX	**MUR**	**DMU-N**	
Height Limit	*Maximum allowable height of structures. See Section D3-6 (Height Limits and Exceptions) for height measurement requirements, and height limit exceptions.*			
Maximum (ft)	60 (2)	60 (2)	85 (2)	
Landscaping	See Chapter D3-II (Landscape Design Standards)			
Parking	See Chapter D3-III (Parking and Loading)			
Signs	See Chapter D3-IV (Signs)			

Footnotes:

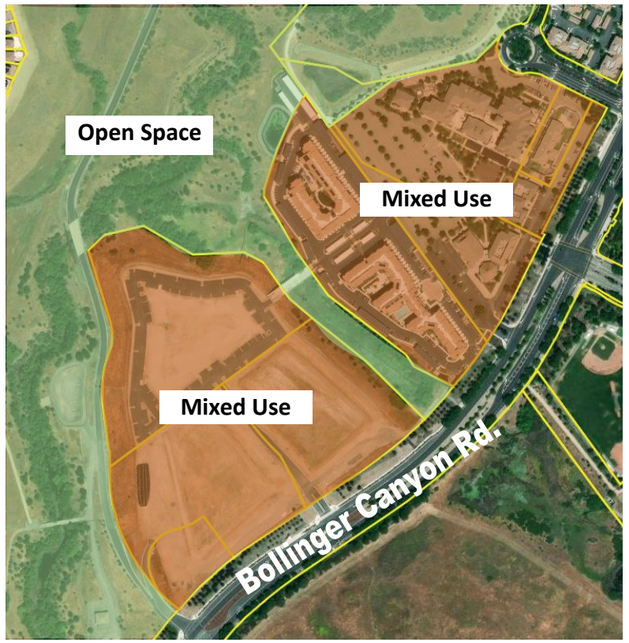
(1) Except that a 25-foot wide side and/or rear yard shall be required abutting a residential zone, and where a lot abuts the Interstate 680 right-of-way; and structures shall not intercept the daylight plane required by Section D2-15.

(2) Except as limited by Daylight Plane Requirements (D2-15.A) and Section D3-6 (Height Limits and Exceptions).

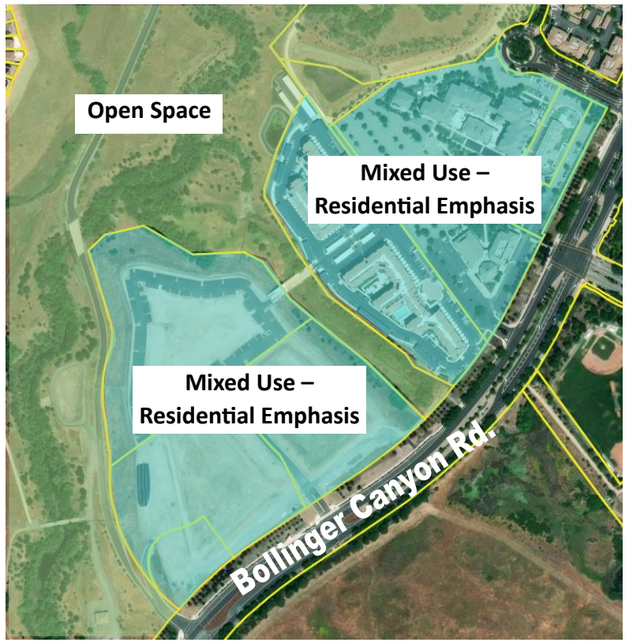
Dougherty Valley Mixed Use Site

(APNs: 222-270-047; 222-270-058; 222-270-059; 222-270-060; 222-270-061; 223-100-063; 223-100-064; 223-100-065; 223-100-066; 223-100-039)

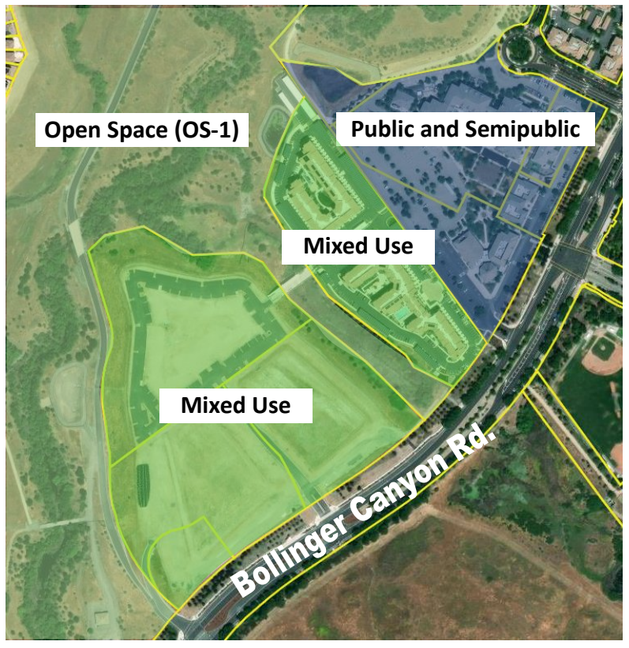
General Plan Land Use – Existing



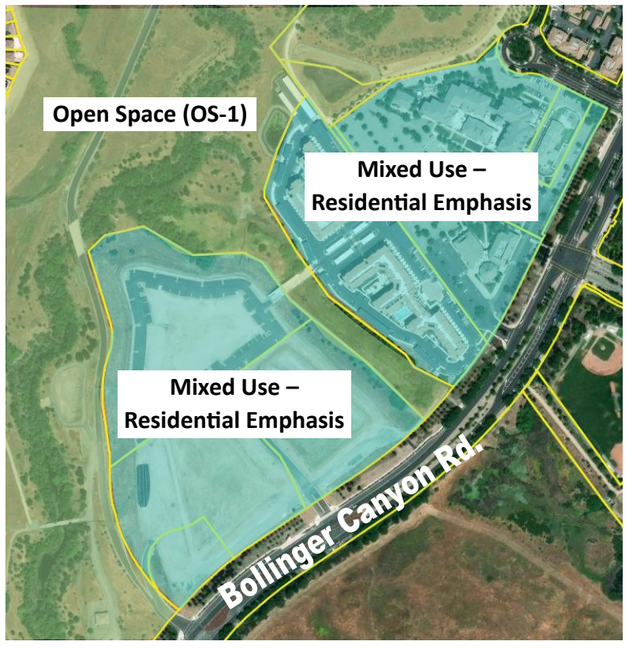
General Plan Land Use – Proposed



Zoning District – Existing (No Change to DVSP)



Zoning District – Proposed (No Change to DVSP)



Sherwood Park

(APN: 223-400-001)

General Plan Land Use – Existing

General Plan Land Use – Proposed

Zoning District – Existing (No Change to DVSP)

Zoning District – Proposed (No Change to DVSP)

Main Branch Open Space

(APNs: 222-270-017, 222-270-010)

General Plan Land Use – Existing

General Plan Land Use – Proposed

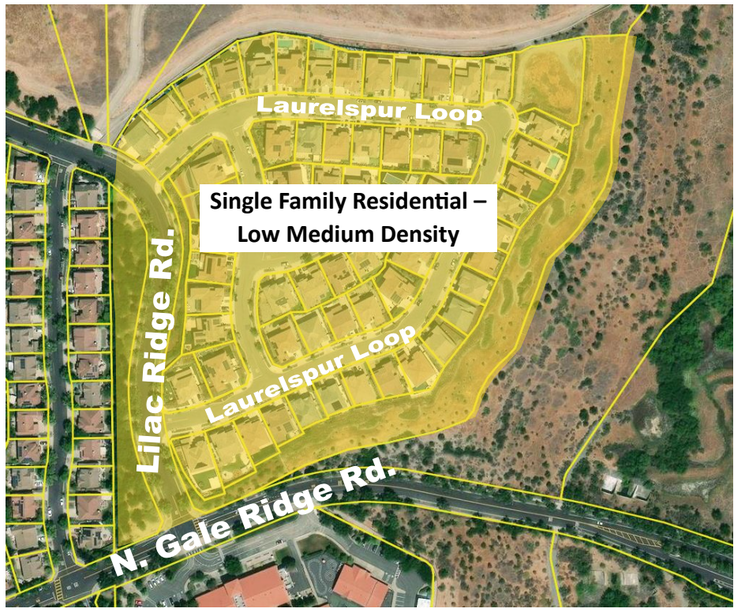
Zoning District – Existing (No Change to DVSP)

Zoning District – Proposed (No Change to DVSP)

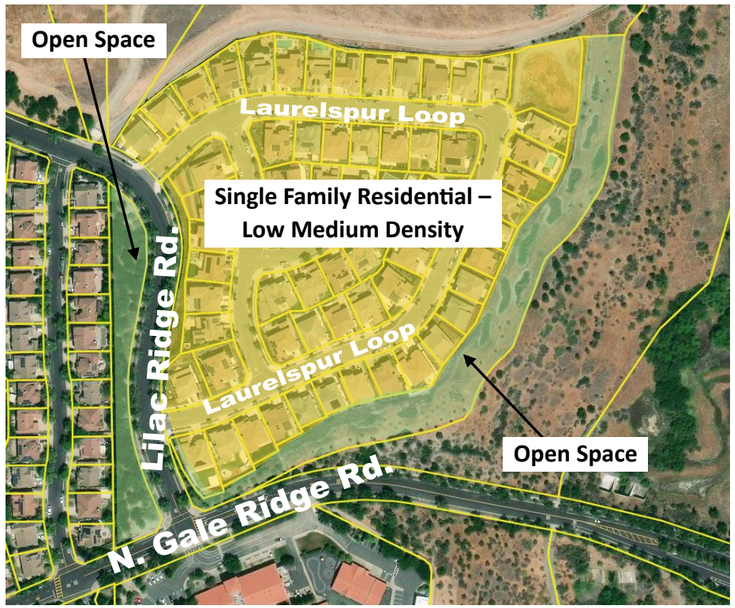
Former Coyote Creek Elementary School Site

(APNs: 222-240-030; 222-620-001; 222-620-002; 222-620-003; 222-620-004; 222-620-005; 222-620-006; 222-620-007; 222-620-008; 222-620-009; 222-620-010; 222-620-011; 222-620-012; 222-620-013; 222-620-014; 222-620-015; 222-620-016; 222-620-017; 222-620-018; 222-620-019; 222-620-020; 222-620-021; 222-620-022; 222-620-023; 222-620-024; 222-620-025; 222-620-026; 222-620-027; 222-620-028; 222-620-029; 222-620-030; 222-620-031; 222-620-032; 222-620-033; 222-620-034; 222-620-068; 222-620-069; 222-620-070; 222-620-038; 222-620-039; 222-620-040; 222-620-041; 222-620-042; 222-620-043; 222-620-044; 222-620-045; 222-620-046; 222-620-047; 222-620-048; 222-620-049; 222-620-050; 222-620-051; 222-620-052; 222-620-053; 222-620-054; 222-620-055; 222-620-056; 222-620-057; 222-620-058; 222-620-059; 222-620-060; 222-620-072; 222-620-073; 222-620-074; 222-620-065; 222-620-066; 222-620-071)

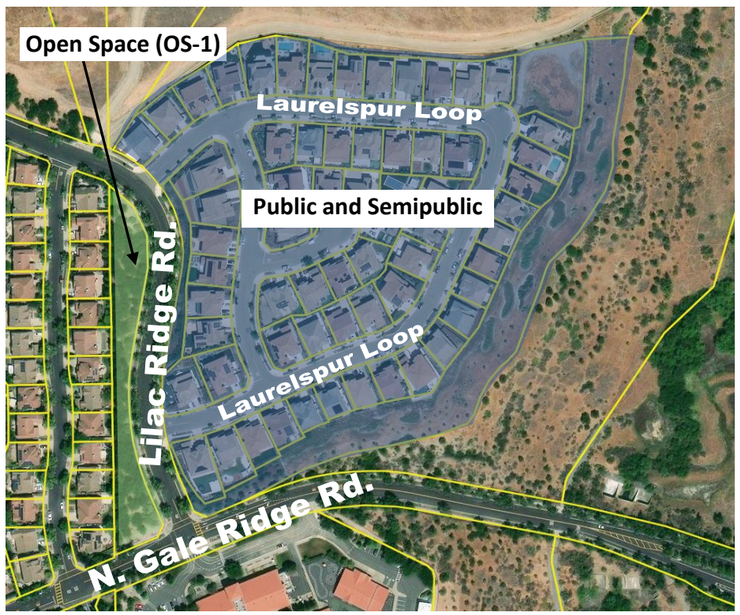
General Plan Land Use – Existing



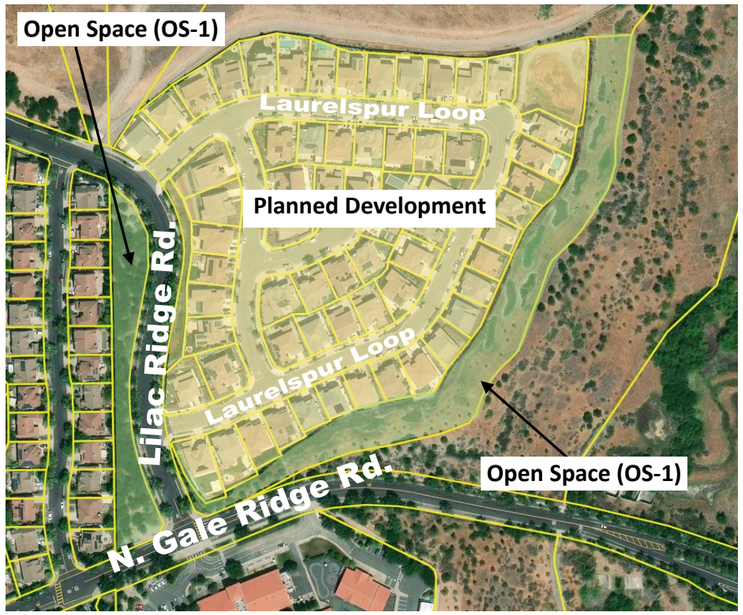
General Plan Land Use – Proposed



Zoning District – Existing (No Change to DVSP)



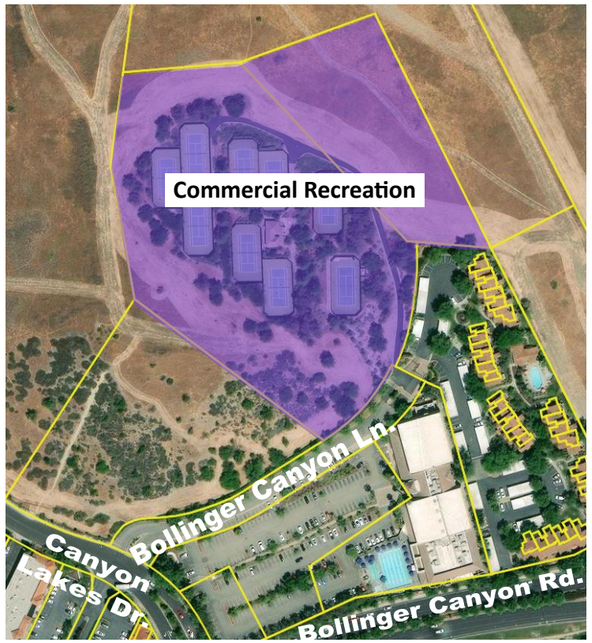
Zoning District – Proposed (No Change to DVSP)



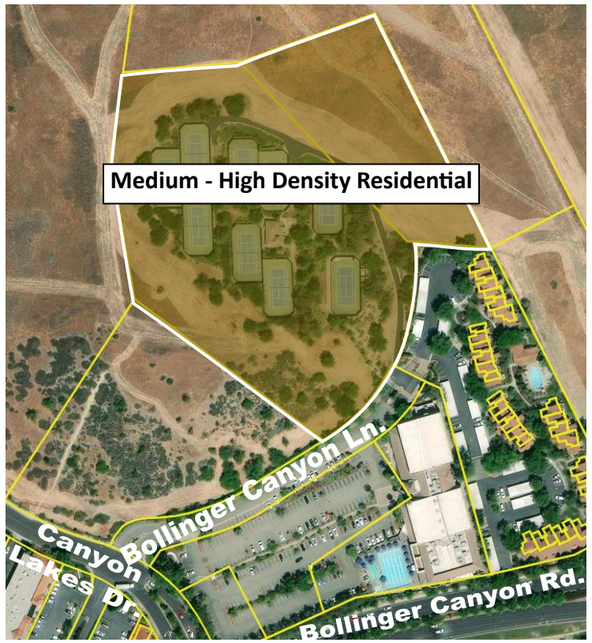
Club Sport Tennis Courts – EIR Land Use Exhibit

(APNs: 213-621-013 and 213-621-009)

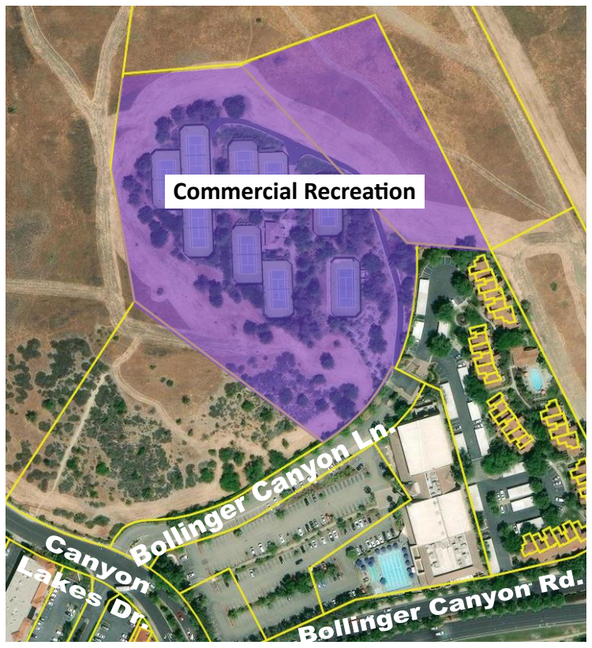
General Plan Land Use – Existing



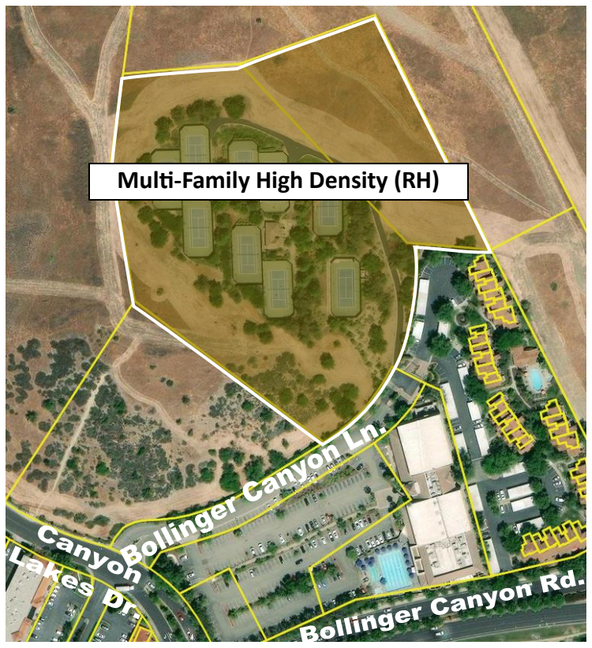
General Plan Land Use – Proposed



Zoning District – Existing



Zoning District – Proposed



Canyon View Dining Hall – EIR Land Use Exhibit

(APNs: 213-610-032 and 213-610-033)

General Plan Land Use – Existing

General Plan Land Use – Proposed

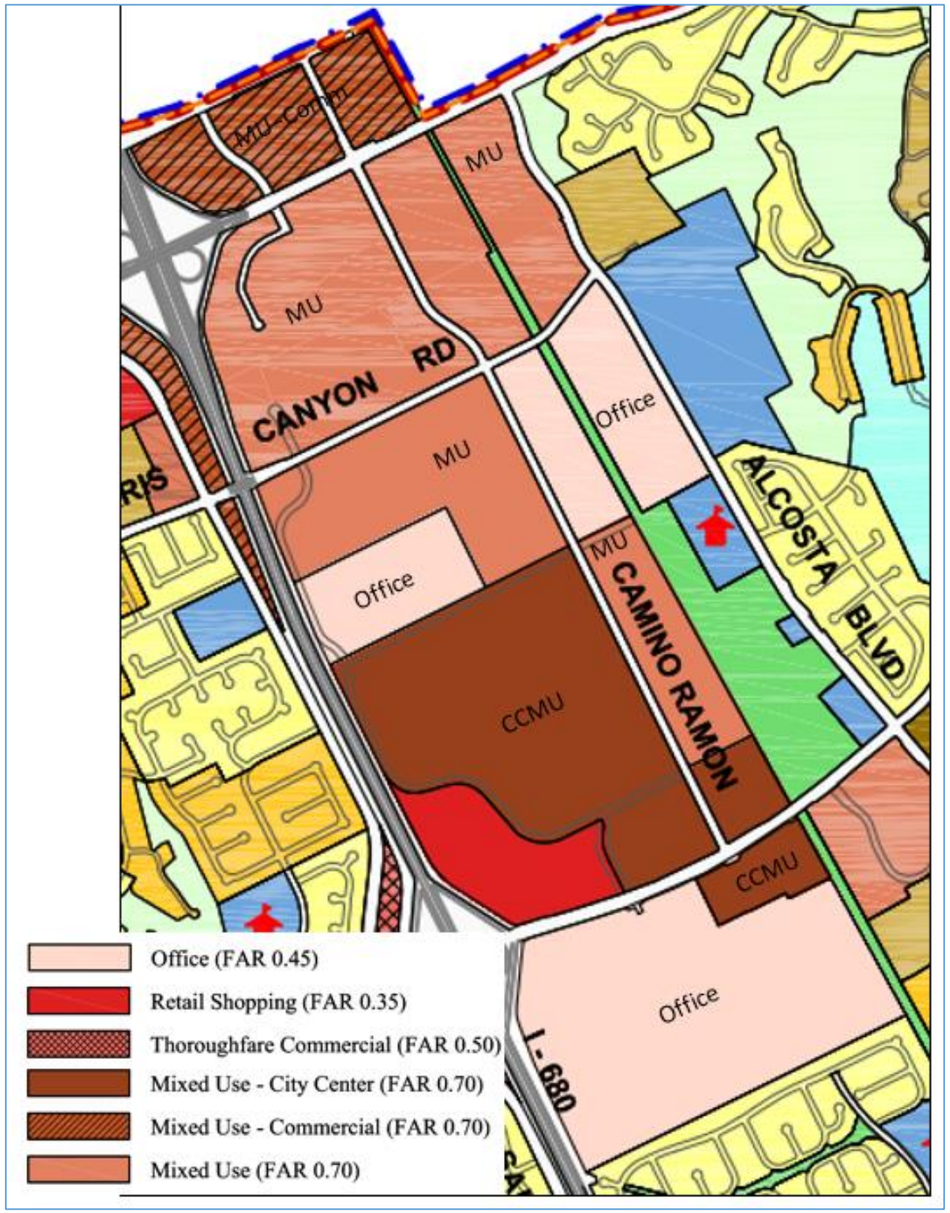
Zoning District – Existing

Zoning District – Proposed

City Core

(APN: 213-133-071; 213-133-080 to -085, -096, -097; 213- 010-033, -036, -037, -039, -046, -047, -052, -053, -054, -055, -057, -058, -059, -060, -064 to -070, 213-133-071 to -045, 213-020-053, -054, -056, 213-930-004, -005, -007 to -125; 213-011-002, -003, -005. -006, 218-101-004, -007, -008; 218-102-011, -013; 218-102-013; 218-111-003, -004; 218-111-020, -021; 218-112-011 to -014, 213-133-070; 213-132-005, -007, -008, -009, 213-133-053; 213-133-087; 213-133-048; 213-120-036; 213-133-099; 213-120-036; 213-020-015 to -017; 213-131-009; 213-131-003; 213-133-078; 213-133-067 to -069; 213-133-051; 213-120-008, -011, -016, -030, -032, -033, -034, -038

General Plan Land Use – Existing

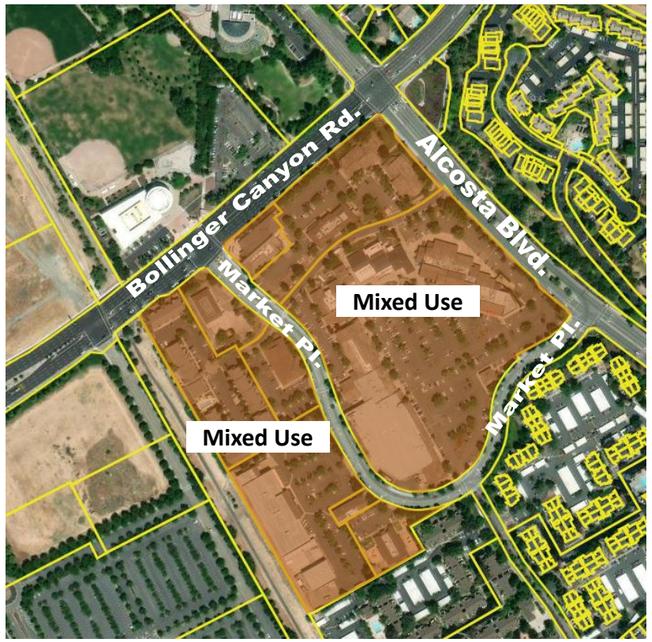


General Plan Land Use and Zoning – Proposed

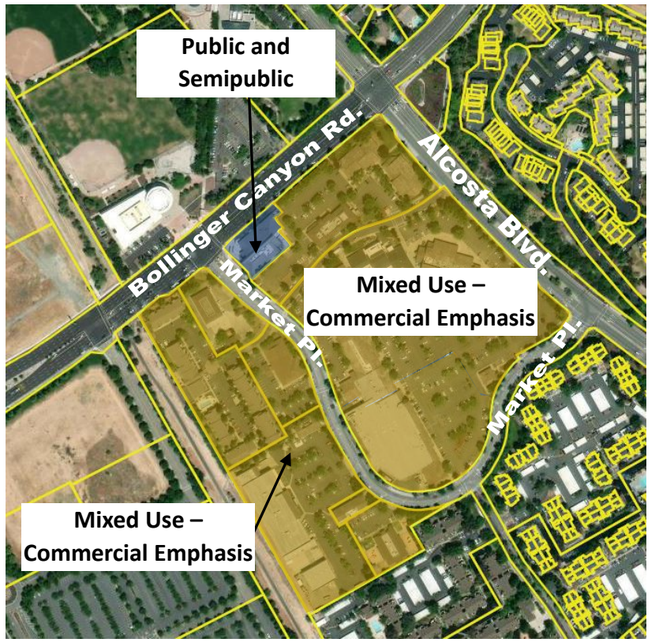
Marketplace

(APNs: 213-701-002; 213-701-003; 213-701-004; 213-702-002; 213-702-003; 213-702-004; 213-702-006; 213-702-007; 213-702-008)

General Plan Land Use – Existing

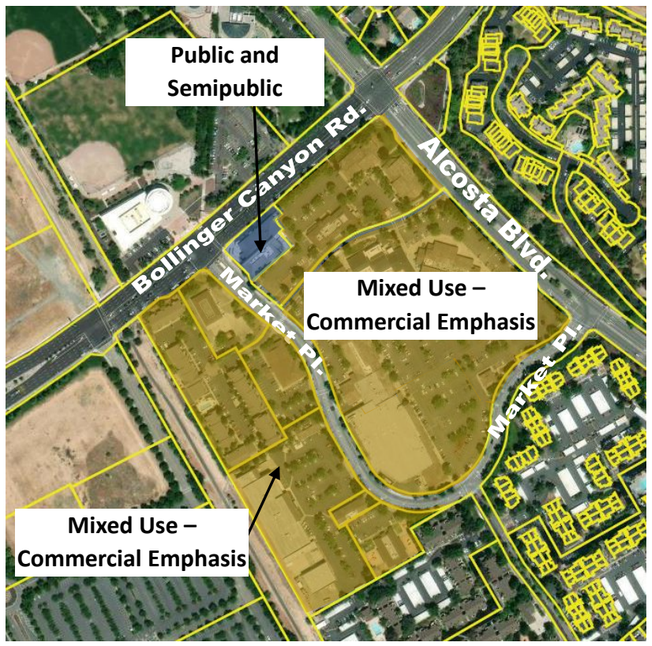


General Plan Land Use – Proposed



Zoning District – Existing

Zoning District – Proposed



Alcosta Professional Center (9260 Alcosta Blvd.)

(APNs: 210-260-054; 210-260-055; 210-260-056; 210-260-057; 210-260-058)

General Plan Land Use – Existing

General Plan Land Use – Proposed

Zoning District – Existing

Zoning District – Proposed

Church of the Valley (19001 San Ramon Valley Blvd.) – EIR Land Use Change

(APN: 211-051-014)

General Plan Land Use – Existing

General Plan Land Use – Proposed

Zoning District – Existing

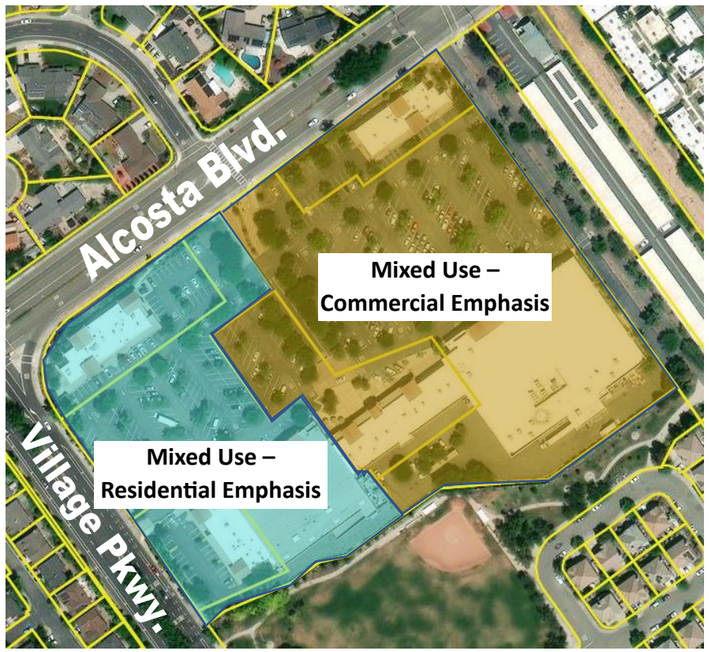
Zoning District – Proposed

Country Club Village (9100 – 9150 Alcosta Blvd.)

(APNs: 210-520-051; 210-520-052; 210-520-053; 210-520-054; 210-520-055; 210-520-056)

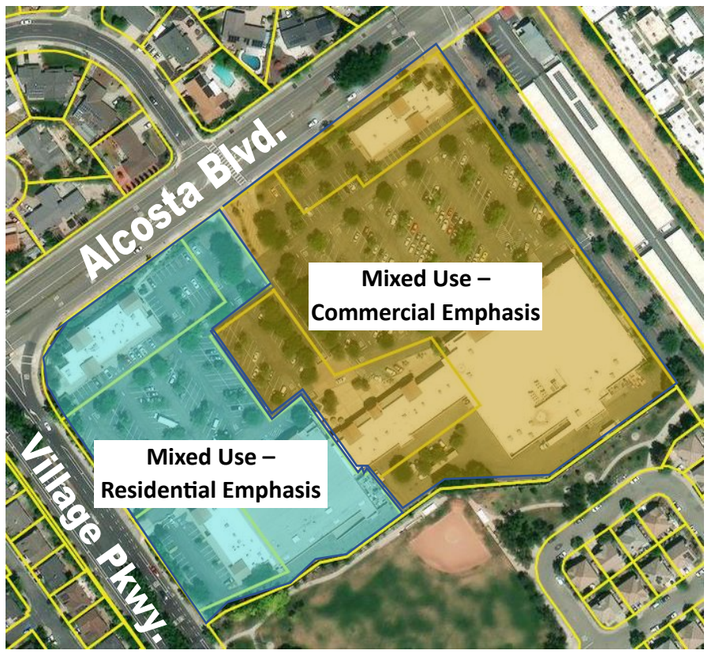
General Plan Land Use – Existing

General Plan Land Use – Proposed



Zoning District – Existing

Zoning District – Proposed



Erik's Deli (2525 – 2551 San Ramon Valley Blvd.)

(APNs: 209-030-093 and 203-030-096)

General Plan Land Use – Existing

General Plan Land Use – Proposed

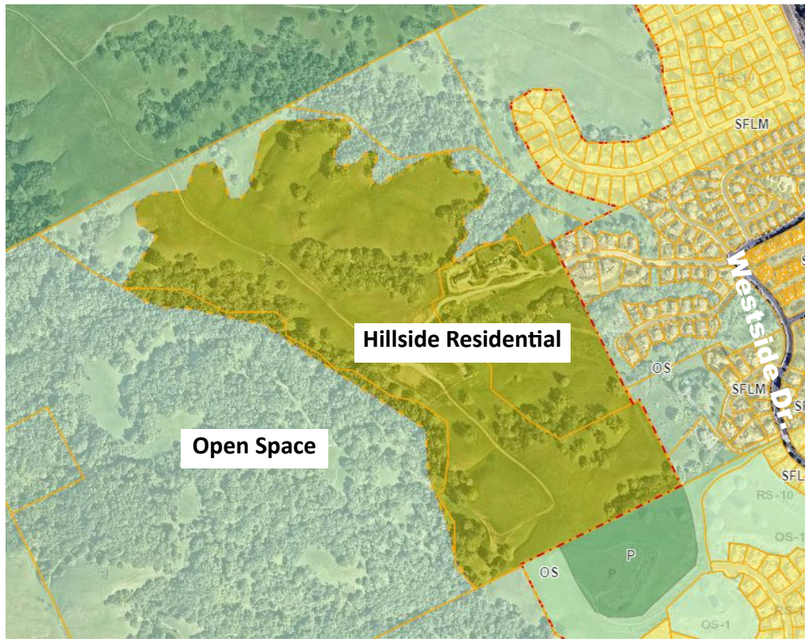
Zoning District – Existing

Zoning District – Proposed

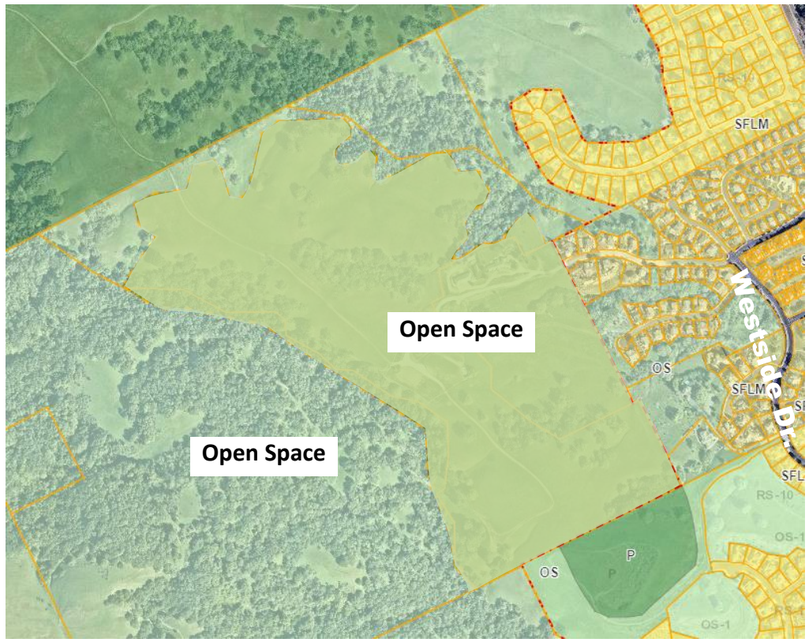
Geldermann Properties

(APNs: 211-010-042; 210-010-043; 210-010-035)

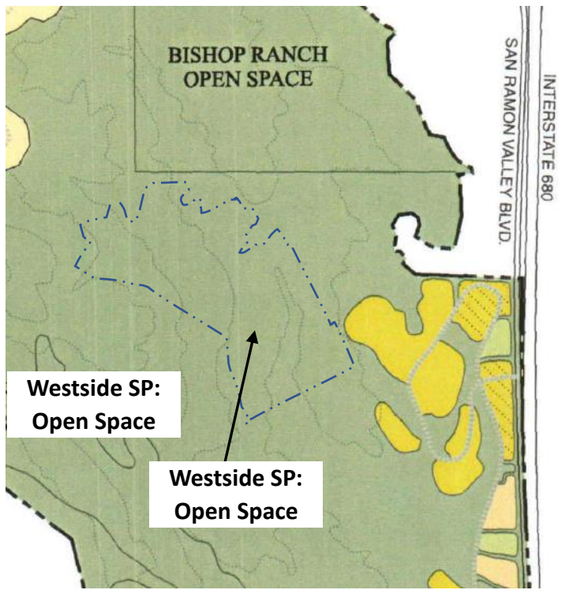
General Plan Land Use – Existing



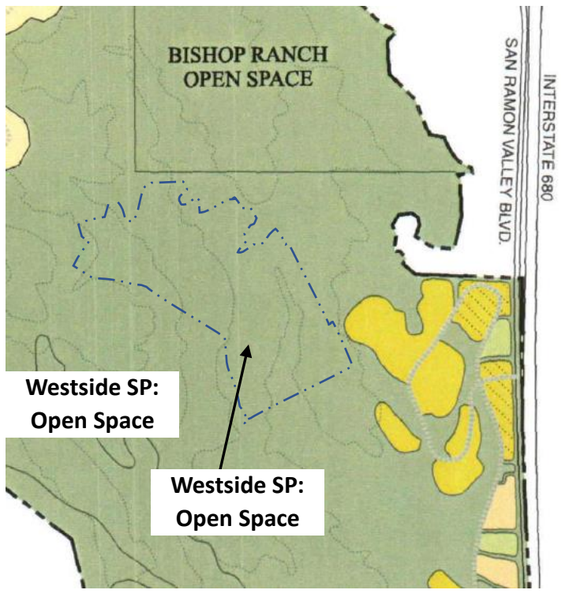
General Plan Land Use – Proposed



Westside Specific Plan Zoning District – Existing



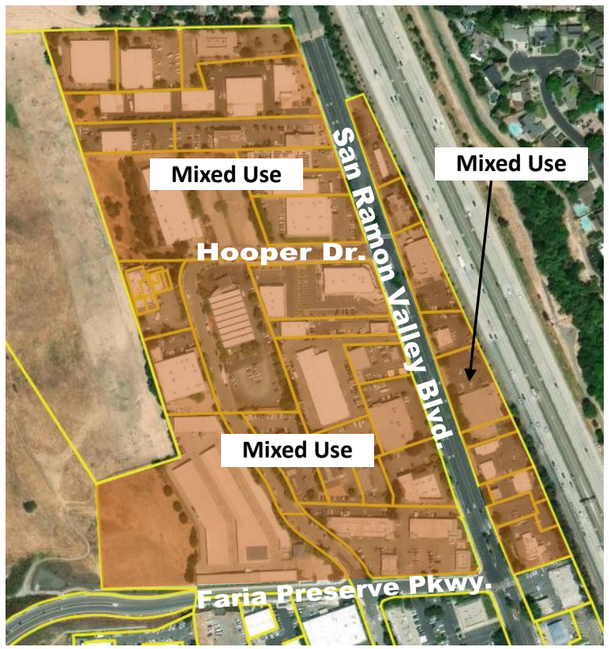
Westside Specific Plan Zoning District – Proposed



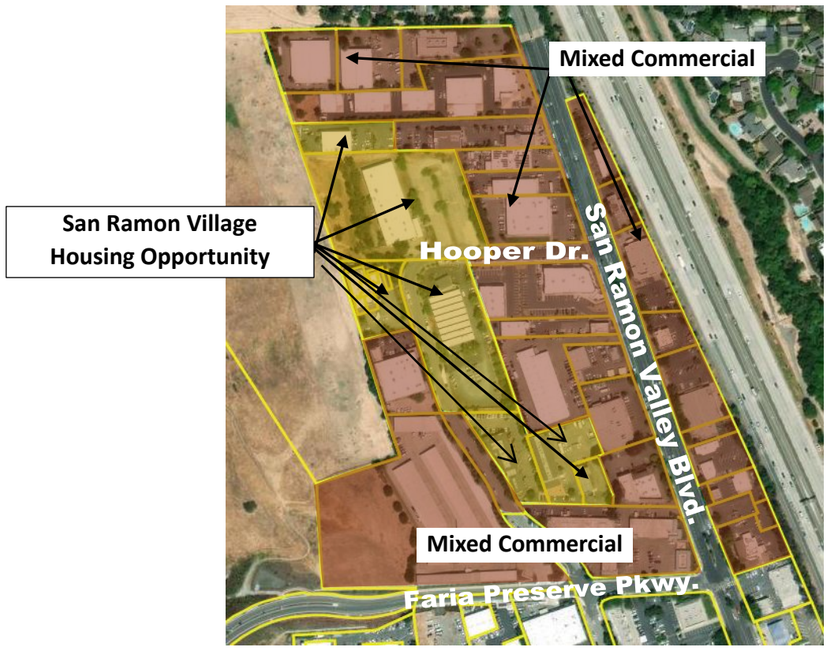
San Ramon Village Specific Plan (SRVSP) – North – EIR Land Use Change

(APNs: 208-250-060; 208-250-061; 208-250-062; 208-250-086; 208-250-088; 208-250-087; 208-250-091; 208-250-053; 208-250-052; 208-250-050; 208-660-007; 208-660-006; 208-660-005; 208-660-004; 208-660-003; 208-660-002; 208-660-001; 208-250-058; 208-250-090; 208-250-075; 208-250-081; 208-250-080; 208-250-073; 208-250-047; 208-260-057; 208-250-084; 208-250-083; 208-250-071; 208-250-072; 208-250-085; 208-260-050)

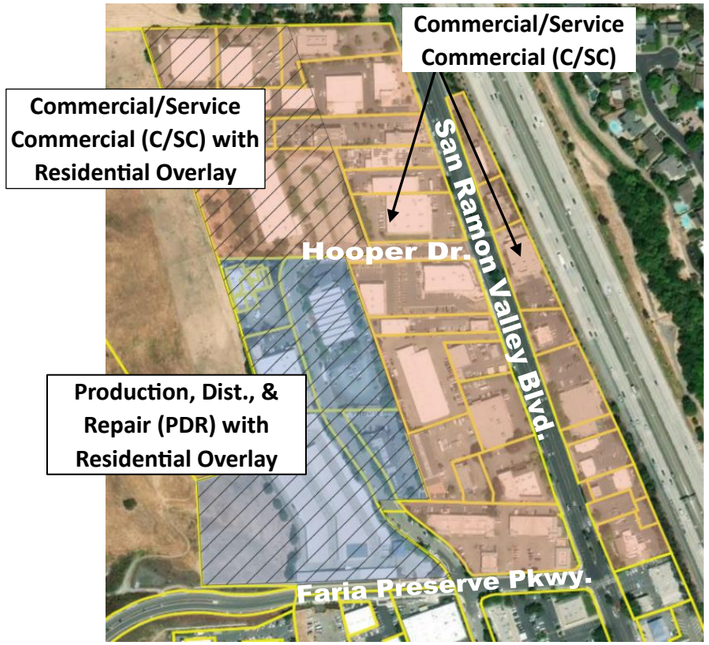
General Plan Land Use – Existing



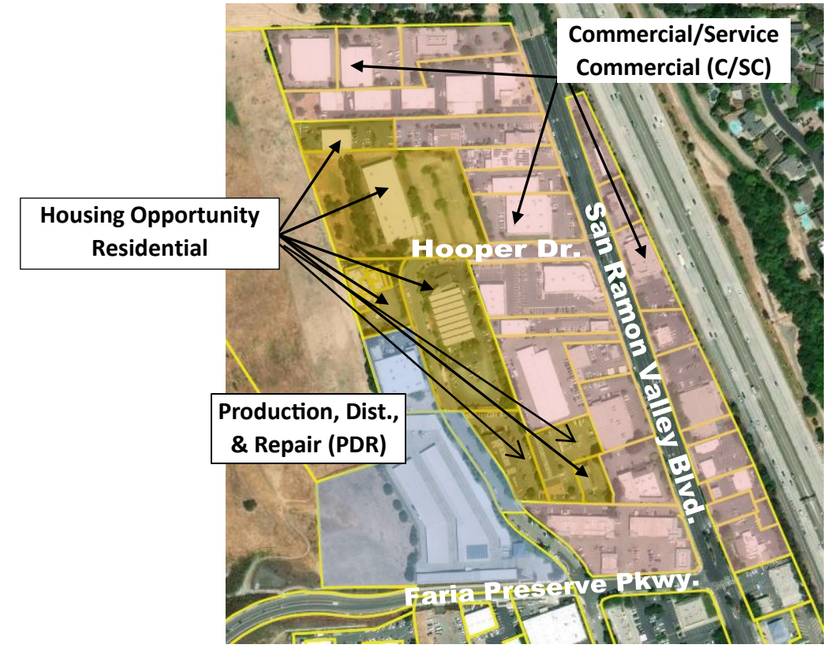
General Plan Land Use – Proposed



SRVSP Zoning District – Existing



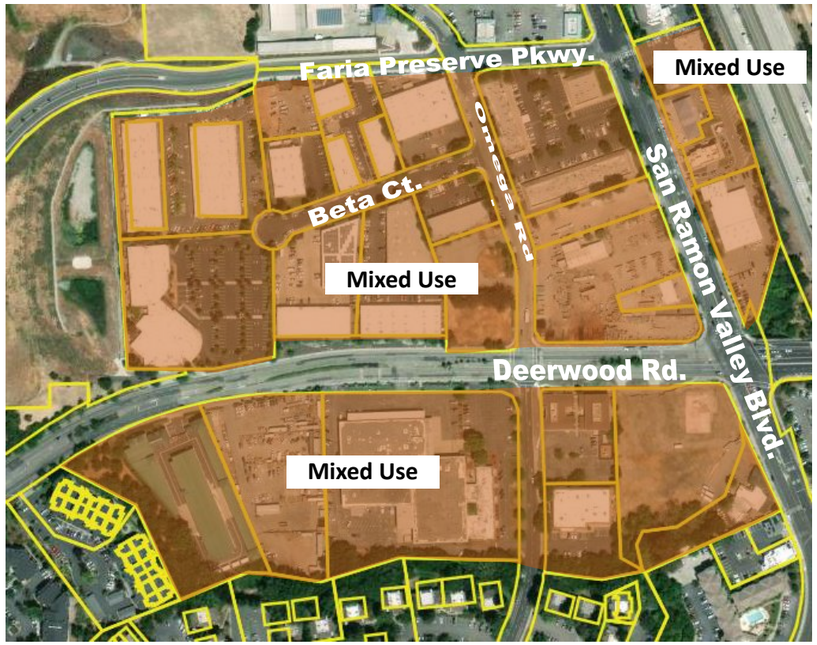
SRVSP Zoning District – Proposed



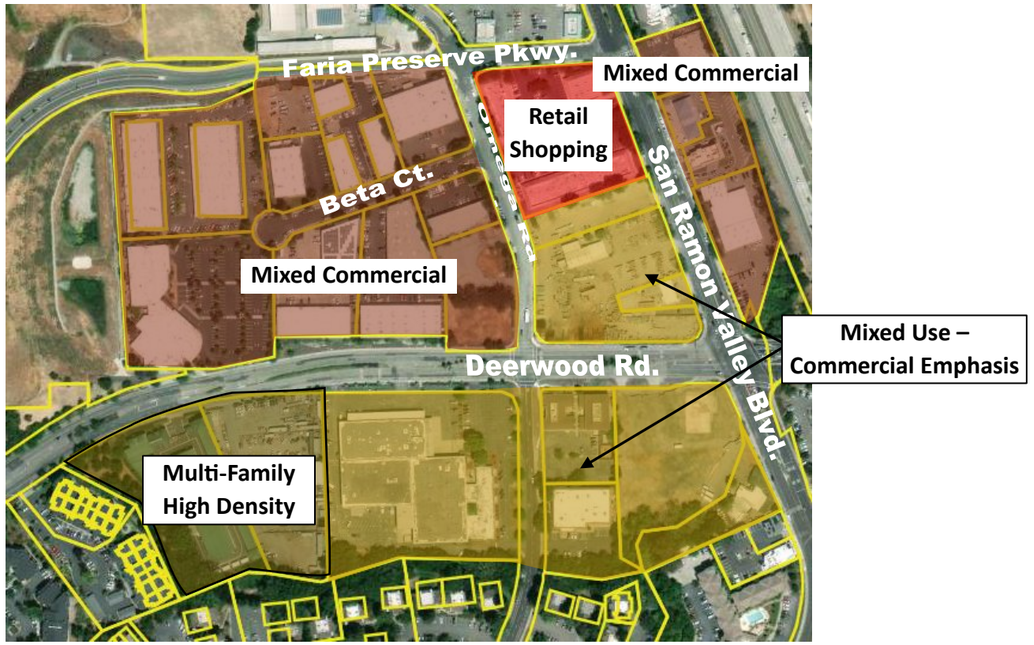
San Ramon Village Specific Plan (SRVSP) - Central

(APNs: 208-451-014; 208-451-015; 208-451-016; 208-451-018; 208-451-017; 208-451-012; 208-451-020; 208-451-021; 208-451-022; 208-451-023; 208-451-019; 208-451-005; -208-451-004; 208-451-003; 208-451-024; 208-452-005; 208-260-036; 208-260-052; 208-260-053; 218-080-029; 218-080-011; 218-080-034; 218-080-028; 208-260-037; 208-260-054; 208-260-056; 208-271-022; 208-271-021; 208-271-041; 208-271-003)

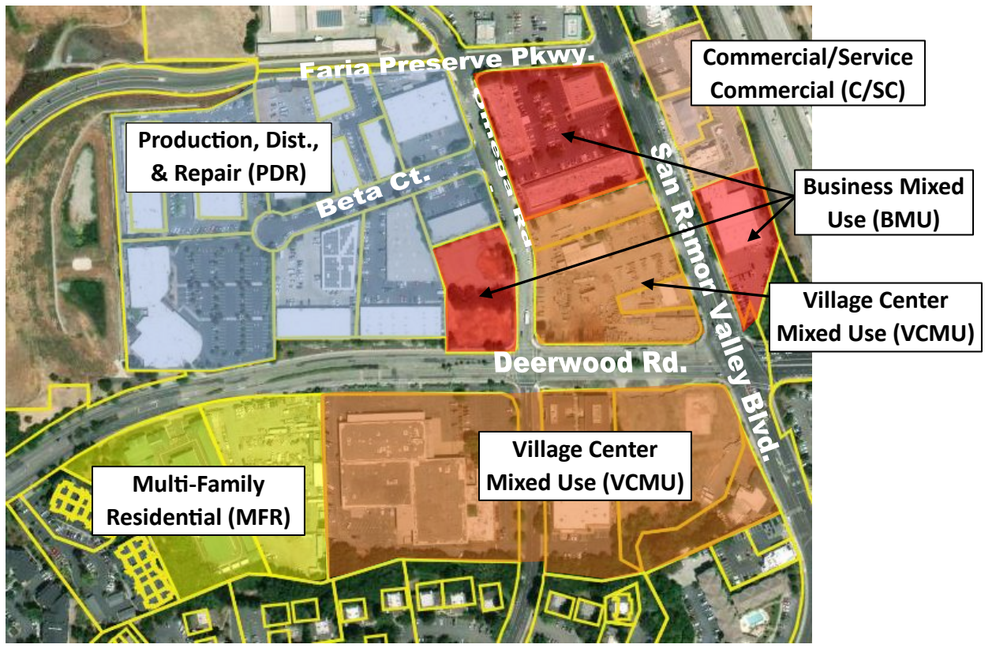
General Plan Land Use – Existing



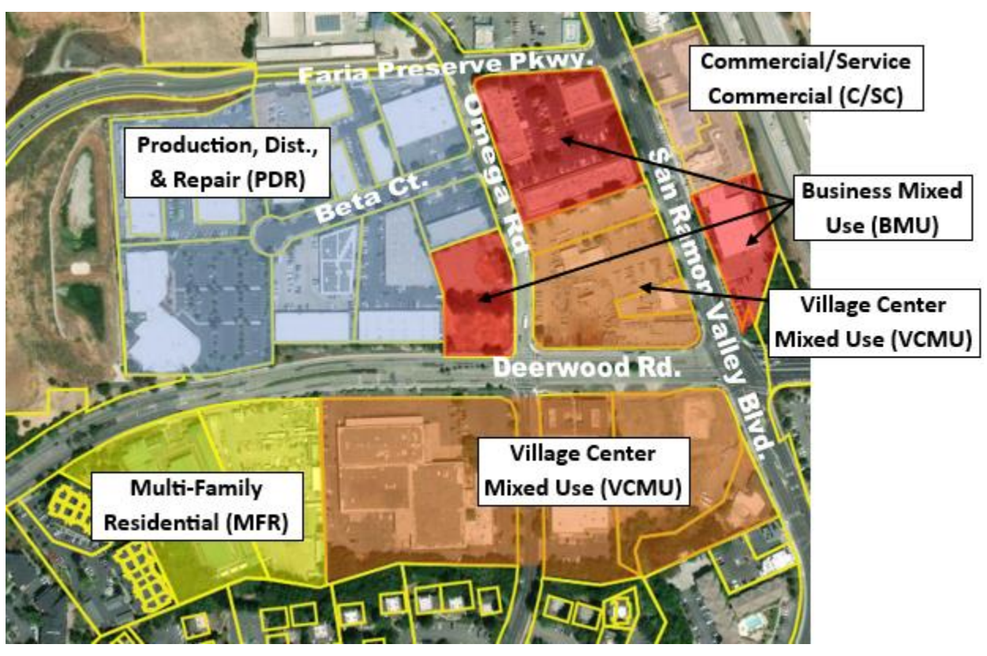
General Plan Land Use – Proposed



SRVSP Zoning District – Existing



SRVSP Zoning District – Proposed

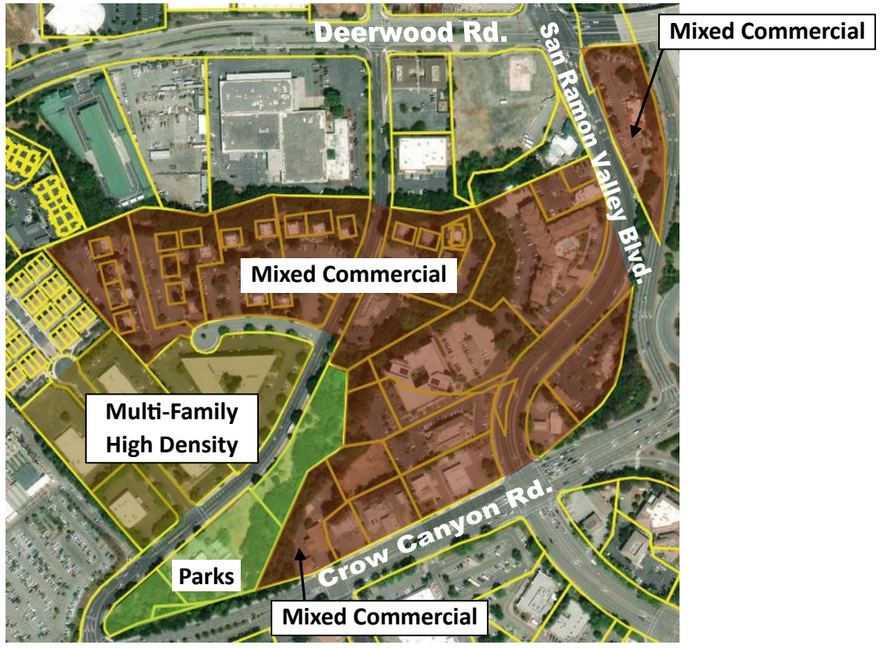


San Ramon Village Specific Plan (SRVSP) - South

(APNs: 218-080-033; 208-272-016; 208-272-011; 208-271-025; 208-271-042; 208-271-029; 208-271-031; 208-290-006; 208-290-011; 208-272-012; 208-290-031; 208-290-032; 208-290-015; 208-290-023; 208-290-027; 208-290-028; 208-271-024; 208-490-010; 208-280-009; 208-280-014; 208-280-015; 208-280-016; 208-271-037; 208-271-038; 208-271-039; 208-271-040; 208-271-032; 208-271-033; 208-271-035; 208-271-036; 208-490-011; 208-490-012; 208-490-013; 208-490-014; 208-490-015; 208-490-016; 208-490-017; 208-490-018; 208-490-019; 208-490-020; 208-490-021; 208-490-022; 208-490-023; 208-490-024; 208-490-025; 208-490-026; 208-490-027; 208-490-028; 208-490-029; 208-490-030)

General Plan Land Use – Existing

General Plan Land Use – Proposed



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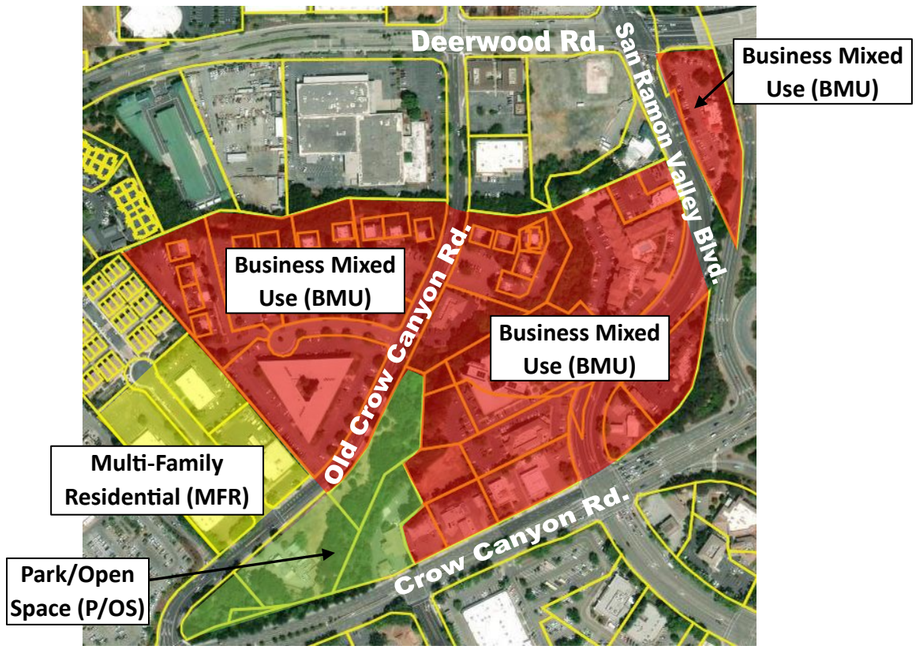

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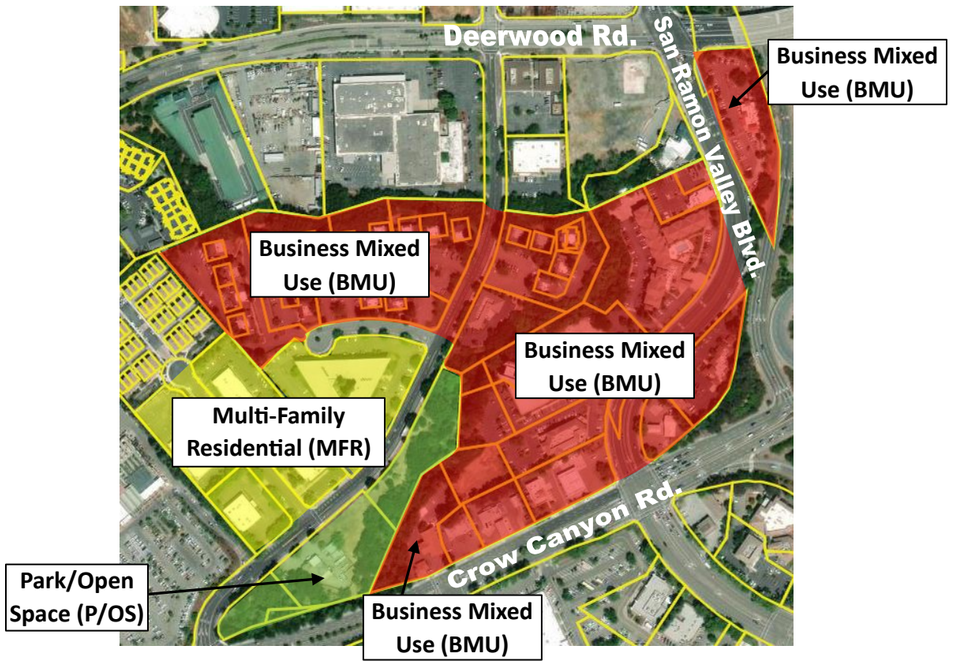
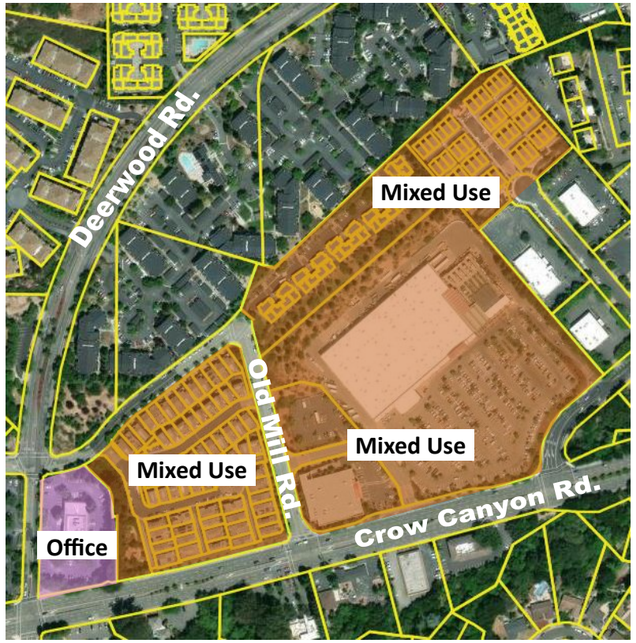


Home Depot Area

(APNs: 208-800-001 through 208-800-049; 208-720-001 through 208-720-037; 208-740-001 through 208-740-073; 208-280-027; 208-280-034; 208-280-033; 208-280-032)

General Plan Land Use – Existing



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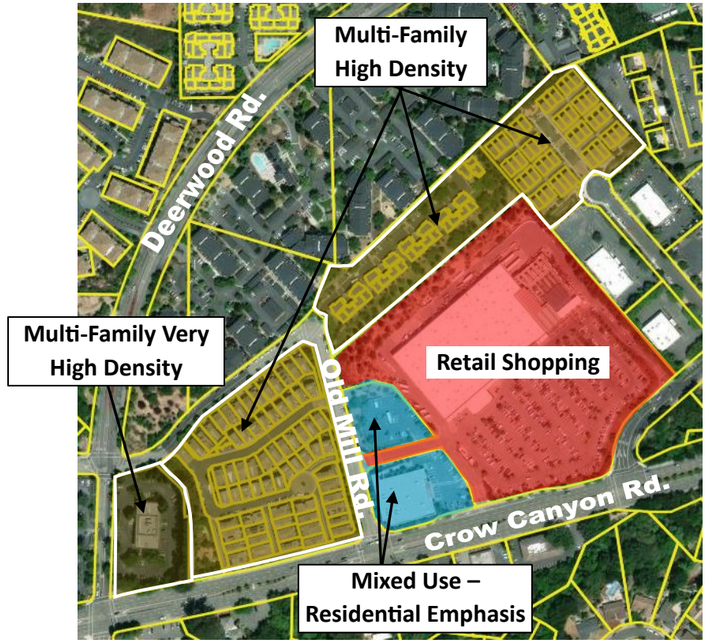

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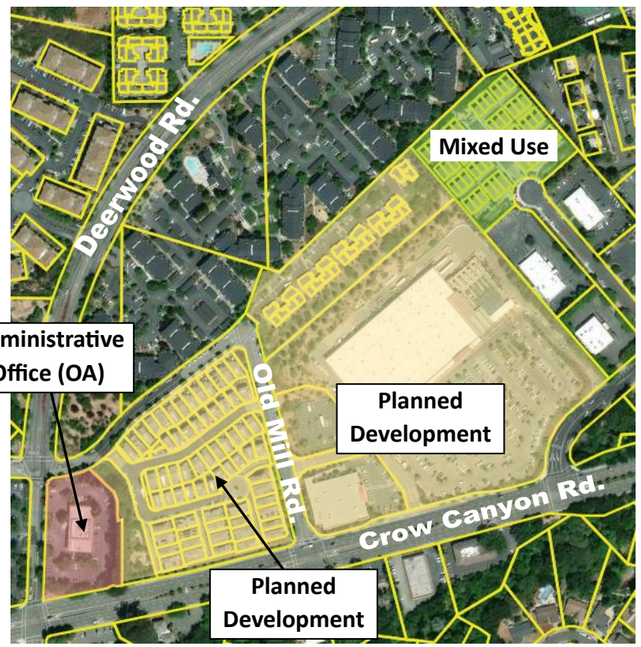
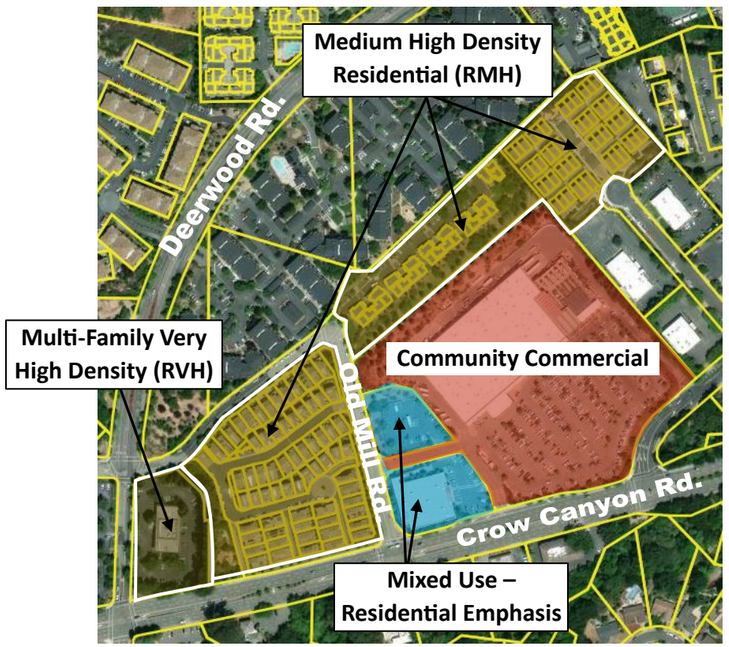


Zoning District – Proposed



Deerwood Unincorporated Island

(APN: 208-700-082)

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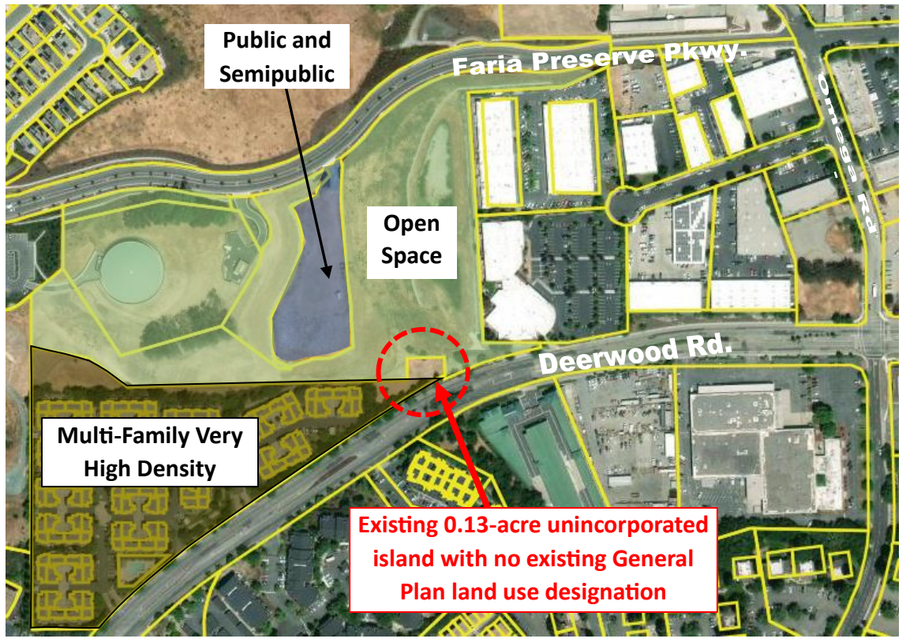

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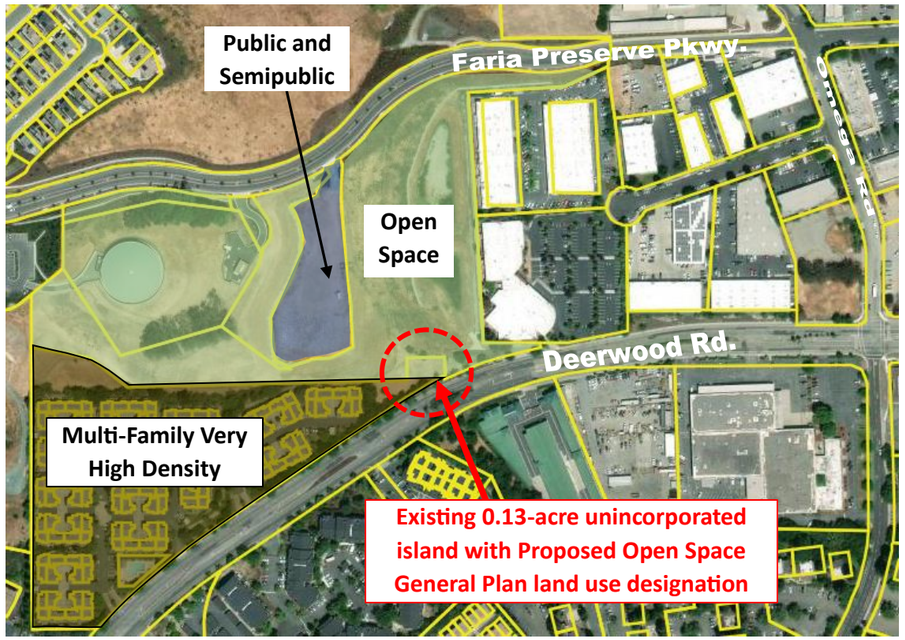
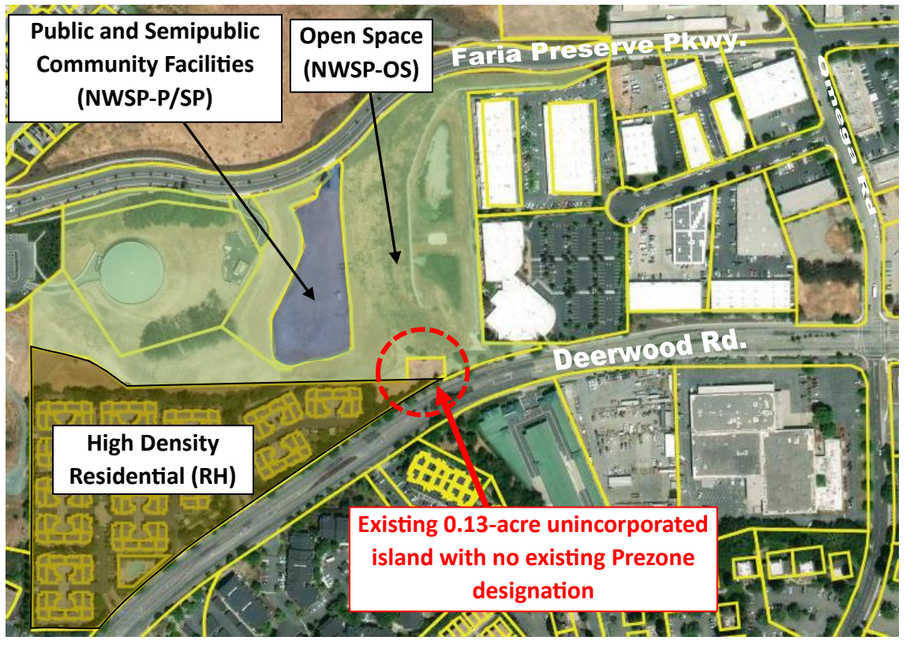
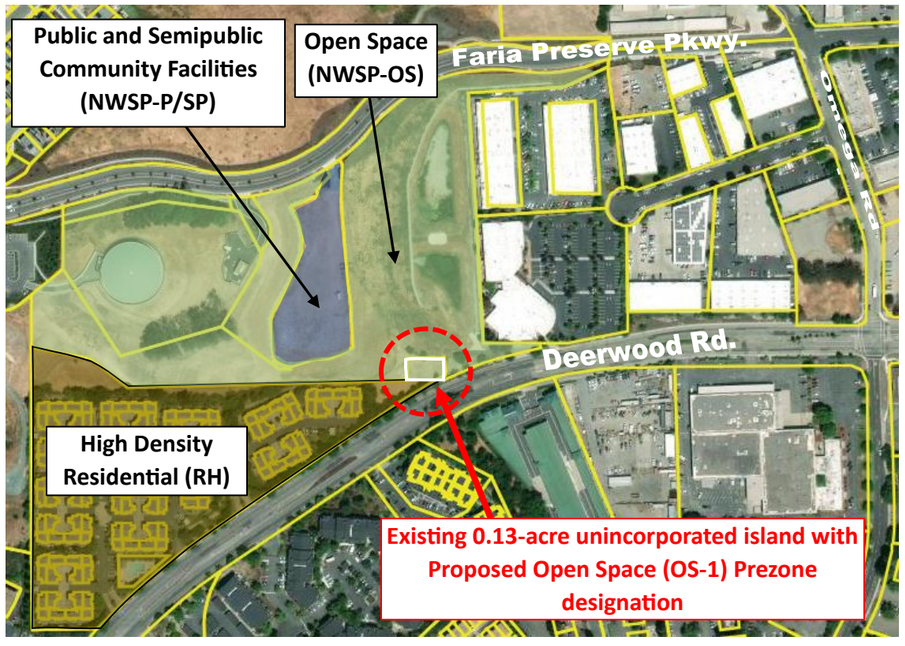


Zoning District – Existing



Zoning District – Proposed



New Mixed-Use Zones

Purposes of New Mixed-Use Zones – Alternatives 2 & 3

The purposes of the individual Mixed-Use zones and the manner in which they are applied are as follows:

A. **MUX (Mixed-Use, Commercial Emphasis) Zone.** The purpose of the Mixed-Use, Commercial Emphasis (MUX) zone is to provide areas for an integrated neighborhood, primarily to enhance existing and promote new commercial uses (retail and/or office) with complementary residential uses. A density range of 20 to 40 dwelling units per acre allows a variety of residential housing types located along street frontages. The MUX zone envisions commercial uses (retail and/or office) as the primary use along street frontages, with residential uses located behind or above the primary commercial uses. Development could be stand-alone, vertical, or horizontal mixed-use configurations. Within the MUX zone, nonresidential FAR minimums are established to maintain retail square footage.

B. **MUR (Mixed-Use, Residential Emphasis) Zone.** The purpose of the Mixed-Use, Residential Emphasis (MUR) zone is to provide areas for an integrated neighborhood, with a combination of primarily residential uses mixed with complementary office and commercial uses. The MUR zone provides housing infill opportunities on existing small and mid-size office and service commercial parcels. A density range of 20 to 40 dwelling units per acre allows a variety of residential housing types located along street frontages. Development can be stand-alone, vertical, or horizontal mixed-use configurations. Within the MUR zone, residential FAR minimums are established to maintain and encourage residential development within this zone.

C. **DMU-N (Downtown Mixed-Use, North) Zone.** The purpose of the Downtown Mixed-Use, North (DMU-N) zone is to encourage an integrated neighborhood of commercial and residential uses within the Core area of San Ramon. The intent is to incorporate new residential uses in the existing office setting with pedestrian-friendly streetscapes, open spaces, and trails connecting to the Iron Horse Trail and City Center. Residential uses are located adjacent to the street and complementary offices, services, and goods in close proximity to transportation networks. The allowed density in the DMU-N zone ranges from a minimum of 20 dwelling units per acre to a maximum of 60 dwelling units per acre. Development is generally intended to be vertical in nature with residential entryways taking advantage of the City's Walking District, and allowance for higher density. Development can be vertical mixed use or stand-alone residential in proximity to nearby commercial uses with a horizontal mixed-use configuration.

D. **DMU-S (Downtown Mixed-Use, South) Zone.** The purpose of the Downtown Mixed-Use, South (DMU-S) zone is to encourage an integrated transit-oriented and mixed use neighborhood, extending the activity of City Center across Bollinger Canyon Road with shops, offices, and a

diversity of housing opportunities set in an urban environment of walkable streets, parks and trails. The intent is to promote a broad mix of uses which incorporates a transition of primarily commercial uses adjacent to the freeway and Bollinger Canyon Road, with residential uses located behind or above the primary commercial uses in close proximity to transportation networks. The allowed density in the DMU-S zone ranges from a minimum of 20 dwelling units per acre to a maximum of 60 dwelling units per acre .Development is generally intended to be more vertical in nature and allowance for higher density closer to the arterial roadway, with an appropriate transitional buffer adjacent to existing residential uses located to the south. Commercial uses (i.e. restaurants and retail) are encouraged along major streets. Development could be stand-alone, vertical, or horizontal mixed-use configurations.

New Mixed-Use Zone Land Uses and Permit Requirements

E. **Allowable Land Uses and Permit Requirements.** Table 1 (Allowed Land Uses and Permit Requirements for New Mixed-Use Zones - Alternatives) identifies the uses of land allowed by this Zoning Ordinance in the Mixed-Use Zones, and the land use permit required to establish each use

F. **Specific Use Regulations.** Where the last column in the table ("Specific Use Regulations") includes a section number, the regulations in the referenced section apply to the use. Provisions in other sections of the Zoning Ordinance may also apply.

Table 1

Allowed Land Uses and Permit Requirements for New Mixed-Use Zones -Alternatives

Key:	P = Allowed by Right (Zoning Clearance may be required) MUP = Minor Use Permit required UP = Conditional Use Permit required S = Permit requirement set by Specific Use Regulation ZC = Zoning Clearance required (–) = Not Allowed				
Land Use (1)	**Permit Required**				**Specific Use Regulations**
	MUX	**MUR**	**DMU-N**	**DMU-S**	
Media Production	ZC(3)	ZC(3)	ZC(3)	ZC(3)	
Recycling Facility	—	—	—	—	
Research and Development, General	MUP	MUP	MUP	MUP	
Research and Development, Limited	ZC(3)	ZC(3)	ZC(3)	ZC(3)	
Laboratory, Non-Medical	MUP	MUP	MUP	MUP	
Commercial Recreation Facility – Indoor	UP	UP	UP	UP	D4-30

Table 1

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Land Use (1)	**Permit Required**				**Specific Use Regulations**
	MUX	**MUR**	**DMU-N**	**DMU-S**	
Conference/Convention Facility	UP	UP	UP	UP	
Fitness/Health Facility	UP	UP	UP	UP	
Library, Museum, Gallery (non-retail gallery)	P	P	P	P	
Meeting Facility, Public or Private	MUP	MUP	MUP	MUP	
Night Club	MUP	MUP	MUP	MUP	
Park and Recreation Facility – Site of 2 acres or less	P	P	P	P	
School – Public or Private	UP	UP	UP	UP	
School – Specialized Education or Training	MUP	MUP	MUP	MUP	
Sports and Entertainment Assembly Facility	UP	UP	UP	UP	
Studio – Art, Dance, Martial Arts, Music, etc. (ground floor)	ZC(3)	ZC(3)	ZC(3)	ZC(3)	
Studio – Art, Dance, Martial Arts, Music, etc. (upper floor)	P	P	P	P	
Theater, Movies, or Performing Arts	UP	UP	UP	UP	
Animal – Wild or Exotic	S	S	S	S	Municipal Code Div. B2
Animal – Domestic	P	P	P	P	
Emergency Shelter	P	P	P	P	
Home Occupation	S	S	S	S	
Live/Work Unit	MUP	MUP	MUP	MUP	
Mixed-Use Project with Residential Component	P	P	P	P	
Supportive Housing	UP	UP	UP	UP	
Transitional Housing	UP	UP	UP	UP	
Residential Care, 6 or fewer	P	P	P	P	
Residential Care, 7 or more	MUP	MUP	MUP	MUP	
Retail Trade					
Accessory Retail and Services	P	P	P	P	
Alcoholic Beverage Manufacturing, Micro-Brewery	UP	UP	UP	UP	
Auto and Vehicle Sales and Rental	MUP(4)	MUP(4)	MUP(4)	MUP(4)	
Building/Landscape Materials Sales – Indoor Showroom	UP	UP	UP	UP	
Convenience Store	P	P	P	P	
Drive-through Retail	UP	UP	UP	UP	
Eating and Drinking Establishments	P	P	P	P	
With wine and beer	P	P	P	P	
With full alcoholic beverage service	MUP	MUP	MUP	MUP	

Table 1

Allowed Land Uses and Permit Requirements for New Mixed-Use Zones -Alternatives

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Land Use (1)	**Permit Required**				**Specific Use Regulations**
	MUX	**MUR**	**DMU-N**	**DMU-S**	
Alcoholic Beverage Manufacturing, Brew Pub	P	P	P	P	
With drive-through service	MUP	MUP	MUP	MUP	
With live entertainment	MUP	MUP	MUP	MUP	D4-34
With up to 12 outdoor seats or stools	P	P	P	P	
With 13 or more outdoor seats or stools	MUP	MUP	MUP	MUP	
Farmer's Market – Ongoing	MUP	MUP	MUP	MUP	
Food and Beverage Sales – Chain Grocery	P	P	P	P	
Food and Beverage Sales – Specialty Food Store	P	P	P	P	
Furniture, Furnishings, and Appliance Store	P(5)	P(5)	P(5)	P(5)	
Mobile Home, Boat, or RV Sales	—	—	—	—	
Outdoor Retail Sales and Activities	MUP	MUP	MUP	MUP	D4-35
Outdoor Vendor	MUP	MUP	MUP	MUP	D4-35
Pharmacy, Medical Supplies	P	P	P	P	
Retail, General – 50,000 sf or less of floor area	P	P	P	P	
Retail, general – Over 50,000 sf of floor area	P	P	P	P	
Secondhand Store	MUP	MUP	MUP	MUP	
ATM	P	P	P	P	
Bank, Financial Services	P	P	P	P	
Business Support Service	P	P	P	P	
Medical Services – Clinic, Laboratory, Urgent Care (ground floor)	MUP(3)	UP(3)	UP(3)	UP(3)	
Medical Services – Clinic, Laboratory, Urgent Care (upper floors)	MUP	MUP	MUP	MUP	
Medical Services – Doctor Office (ground floor)	P(2)	P(2)	P(2)	P(2)	
Medical Services – Doctor Office (upper floors)	P(2)	P(2)	P(2)	P(2)	
Medical Services – Extended Care	UP	UP	UP	UP	
Office – Accessory	P	P	P	P	
Office – Business/Service (ground floor)	P	P	P	P	
Office – Business/Service (upper floors)	P	P	P	P	
Office – Government (ground floor)	P	P	P	P	
Office – Government (upper floors)	P	P	P	P	
Office – Processing (ground floor)	MUP	MUP	MUP	MUP	
Office – Processing (upper floors)	MUP	MUP	MUP	MUP	
Office - Professional/Administrative (ground floor)	P	P	P	P	
Office - Professional/Administrative (upper floors)	P	P	P	P	

Table 1

Allowed Land Uses and Permit Requirements for New Mixed-Use Zones -Alternatives

Key:	P = Allowed by Right (Zoning Clearance may be required) MUP = Minor Use Permit required UP = Conditional Use Permit required S = Permit requirement set by Specific Use Regulation ZC = Zoning Clearance required (–) = Not Allowed				
Land Use (1)	**Permit Required**				**Specific Use Regulations**
	MUX	**MUR**	**DMU-N**	**DMU-S**	
Adult Day Care	UP	UP	UP	UP	
Animal Services – Boarding/Training	MUP	MUP	MUP	MUP	
Animal Services – Grooming	ZC(3)	ZC(3)	ZC(3)	ZC(3)	
Animal Services – Veterinary Clinic, Animal Hospital	MUP	MUP	MUP	MUP	
Catering Service	MUP(3)	MUP(3)	MUP(3)	MUP(3)	
Child Day Care Center	UP	UP	UP	UP	
Child Day Care Center – Accessory to on-site anchor tenant	UP	UP	UP	UP	
Child Day Care – Small family day care home	P	P	P	P	
Lodging – Bed & Breakfast Inn (B&B)	UP	UP	UP	UP	D4-27
Lodging – Hotel or Motel	UP	UP	UP	UP	
Personal Services	ZC(3)	ZC(3)	ZC(3)	ZC(3)	
Public Safety Facility	P	P	P	P	
Broadcasting Studio	MUP	MUP	MUP	MUP	
Cogeneration Facility	UP	UP	UP	UP	
Heliport	UP	UP	UP	UP	
Parking Facility, Public or Commercial	UP	UP	UP	UP	
Transit Station	P	P	P	P	
Utility Facility	UP	UP	UP	UP	
Utility Infrastructure	P	P	P	P	
Wireless Telecommunications Facility	S	S	S	S	

Footnotes:

(1) See division D8 for land use definitions.

(2) Use allowed only if it does not exceed 10% of the total office space on the site.

(3) Use allowed with a Minor Use Permit or Zoning Clearance, as identified in the table above, on ground floor if non-retail uses occupy 25% or less of the gross ground floor area. Non-retail uses exceeding 25% gross ground floor area may be authorized by a Minor Use Permit when the economic findings in Section D4-38 Non-Retail Uses within Retail/Commercial Centers can be made.

(4) Limited to an auto rental agency accessory to a hotel or retail sales/showroom.

(5) Allowed only as accessory to department store.

New Mixed-Use Zone General Development Standards

Subdivisions, new land uses and structures, and alterations to existing land uses and structures, shall be designed, constructed, and/or established in compliance with the requirements in Table 2 (New Mixed-Use Zone Development standards - Alternatives), in addition to the applicable development standards (e.g., landscaping, parking, and loading, etc.) in Division D3 of this Zoning Ordinance.

Table 2
New Mixed-Use Zone Development Standards - Alternatives

Development Feature	Requirement by Zone			
	MUX	**MUR**	**DMU-N**	**DMU-S**
Minimum Lot Size	*The minimum area and width for parcels proposed in new subdivisions.*			
Area (net)	Determined through subdivision process			
Width	Determined through subdivision process			
Depth	Determined through subdivision process			
Residential Density	*Minimum site area per dwelling unit as determined by the General Plan. The actual number of units allowed will be determined through subdivision or land use permit approval.*			
Minimum Density (du/ac)	20	20	20	20
Maximum Density (du/ac)	40	40	60	60
Floor Area Ratio (FAR)	*The measurement of a structure's floor area in relation to the size of the lot that the structure(s) is located on. FAR is expressed as a decimal number and is derived by dividing the total net area of the structure(s) by the total area of the lot (structure area ÷ lot area).*			
Sitewide Minimum	0.70	0.70	1.25	1.25
Sitewide Maximum	2.0	2.0	2.75	2.75
Nonresidential Minimum	0.45	N.A.	N.A.	N.A.
Residential Minimum	N.A.	0.5	N.A.	N.A.
Setbacks (1)	*Minimum setbacks required. See Section D3-10 for exceptions, and allowed projections into setbacks.*			
Front	10 feet			
Side – Interior (each)	Determined through project review and approval			
Side – Corner	Determined through project review and approval			
Rear	Determined through project review and approval			
Accessory Structure	See Section D4-26 (Accessory Structures)			
Lot Coverage	*The maximum percentage of total lot area that may be covered by structures.*			
Maximum	N.A.	N.A.	N.A.	N.A.

Table 2

New Mixed-Use Zone Development Standards - Alternatives

Development Feature	Requirement by Zone			
	MUX	**MUR**	**DMU-N**	**DMU-S**
Height Limit	*Maximum allowable height of structures. See Section D3-6 (Height Limits and Exceptions) for height measurement requirements, and height limit exceptions.*			
Maximum (ft)	60 (2)	60 (2)	85 (2)	85 (2)
Landscaping	See Chapter D3-II (Landscape Design Standards)			
Parking	See Chapter D3-III (Parking and Loading)			
Signs	See Chapter D3-IV (Signs)			

Footnotes:

(1) Except that a 25-foot wide side and/or rear yard shall be required abutting a residential zone, and where a lot abuts the Interstate 680 right-of-way; and structures shall not intercept the daylight plane required by Section D2-15.

(2) Except as limited by Daylight Plane Requirements (D2-15.A) and Section D3-6 (Height Limits and Exceptions).

Appendix B

Special Status Species Tables

Scientific Name Common Name	Status	Habitat Requirements
Plants and Lichens		
Amsinckia grandiflora large-flowered fiddleneck	FE/SCE G1/S1 1B.1	Annual herb. Cismontane woodland, valley, and foothill grassland. Annual grassland in various soils. Elevations: 885-1805ft. (270-550m.) Blooms (Mar)Apr-May.
Amsinckia lunaris bent-flowered fiddleneck	None/None G3/S3 1B.2	Annual herb. Cismontane woodland, coastal bluff scrub, valley and foothill grassland. Elevations: 10-1640ft. (3-500m.) Blooms Mar-Jun.
Arctostaphylos auriculata Mt. Diablo manzanita	None/None G2/S2 1B.3	Perennial evergreen shrub. Chaparral, cismontane woodland. In canyons and on slopes. On sandstone. Elevations: 445-2135ft. (135-650m.) Blooms Jan-Mar.
Arctostaphylos manzanita ssp. *laevigata* Contra Costa manzanita	None/None G5T2/S2 1B.2	Perennial evergreen shrub. Chaparral. Rocky slopes. Elevations: 1410-3610ft. (430-1100m.) Blooms Jan-Mar(Apr).
Astragalus tener var. *tener* alkali milk-vetch	None/None G2T1/S1 1B.2	Annual herb. Playas, valley and foothill grassland, vernal pools. Alkaline. Elevations: 5-195ft. (1-60m.) Blooms Mar-Jun.
Atriplex depressa brittlescale	None/None G2/S2 1B.2	Annual herb. Chenopod scrub, meadows and seeps, playas, valley and foothill grassland, vernal pools. Alkaline, clay. Elevations: 5-1050ft. (1-320m.) Blooms Apr-Oct.
Atriplex minuscula lesser saltscale	None/None G2/S2 1B.1	Annual herb. Chenopod scrub, playas, valley and foothill grassland. Alkaline, sandy. Elevations: 50-655ft. (15-200m.) Blooms May-Oct.
Balsamorhiza macrolepis big-scale balsamroot	None/None G2/S2 1B.2	Perennial herb. Chaparral, cismontane woodland, valley and foothill grassland. Serpentinite (sometimes). Elevations: 150-5100ft. (45-1555m.) Blooms Mar-Jun.
Blepharizonia plumosa big tarplant	None/None G1G2/S1S2 1B.1	Annual herb. Valley and foothill grassland. Clay (usually). Elevations: 100-1655ft. (30-505m.) Blooms Jul-Oct.
Calochortus pulchellus Mt. Diablo fairy-lantern	None/None G2/S2 1B.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland. On wooded and brushy slopes. Elevations: 100-2755ft. (30-840m.) Blooms Apr-Jun.
Campanula exigua chaparral harebell	None/None G2/S2 1B.2	Annual herb. Chaparral. Rocky sites, usually on serpentine in chaparral. Elevations: 900-4100ft. (275-1250m.) Blooms May-Jun.
Centromadia parryi ssp. *congdonii* Congdon's tarplant	None/None G3T1T2/S1S2 1B.1	Annual herb. Valley and foothill grassland. Alkaline soils sometimes described as heavy white clay. Elevations: 0-755ft. (0-230m.) Blooms May-Oct(Nov).
Chloropyron maritimum ssp. *palustre* Point Reyes salty bird's-beak	None/None G4?T2/S2 1B.2	Annual herb (hemiparasitic). Marshes and swamps. Usually in coastal salt marsh with Salicornia, Distichlis, Jaumea, Spartina, etc. Elevations: 0-35ft. (0-10m.) Blooms Jun-Oct.

Chloropyron palmatum palmate-bracted bird's-beak	FE/SCE G1/S1 1B.1	Annual herb (hemiparasitic). Chenopod scrub, valley and foothill grassland. Alkaline. Elevations: 15-510ft. (5-155m.) Blooms May-Oct.
Cordylanthus nidularius Mt. Diablo bird's-beak	None/SCR G1/S1 1B.1	Annual herb (hemiparasitic). Chaparral. Grassy or rocky areas within serpentine chaparral. Elevations: 1970-2625ft. (600-800m.) Blooms Jun-Aug.
Cryptantha hooveri Hoover's cryptantha	None/None GH/SH 1A	Annual herb. Inland dunes, valley and foothill grassland. In coarse sand. Elevations: 30-490ft. (9-150m.) Blooms Apr-May.
Delphinium californicum ssp. *interius* Hospital Canyon larkspur	None/None G3T3/S3 1B.2	Perennial herb. Chaparral, cismontane woodland, coastal scrub. In wet, boggy meadows, openings in chaparral and in canyons. Elevations: 640-3595ft. (195-1095m.) Blooms Apr-Jun.
Eriastrum ertterae Lime Ridge eriastrum	None/None G1/S1 1B.1	Annual herb. Chaparral. Openings or edges; alkaline or semi-alkaline, sandy. Elevations: 655-950ft. (200-290m.) Blooms Jun-Jul.
Eriogonum truncatum Mt. Diablo buckwheat	None/None G1/S1 1B.1	Annual herb. Chaparral, coastal scrub, valley and foothill grassland. Dry, exposed clay or sandy substrates. Elevations: 10-1150ft. (3-350m.) Blooms Apr-Sep(Nov-Dec).
Eryngium aristulatum var. *hooveri* Hoover's button-celery	None/None G5T1/S1 1B.1	Annual/perennial herb. Vernal pools. Alkaline depressions, vernal pools, roadside ditches and other wet places near the coast. Elevations: 10-150ft. (3-45m.) Blooms (Jun)Jul(Aug).
Eryngium jepsonii Jepson's coyote-thistle	None/None G2/S2 1B.2	Perennial herb. Valley and foothill grassland, vernal pools. Clay. Elevations: 10-985ft. (3-300m.) Blooms Apr-Aug.
Extriplex joaquinana San Joaquin spearscale	None/None G2/S2 1B.2	Annual herb. Chenopod scrub, meadows and seeps, playas, valley and foothill grassland. In seasonal alkali wetlands or alkali sink scrub with Distichlis spicata, Frankenia, etc. Elevations: 5-2740ft. (1-835m.) Blooms Apr-Oct.
Fritillaria liliacea fragrant fritillary	None/None G2/S2 1B.2	Perennial bulbiferous herb. Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland. Often on serpentine, various soils reported though usually on clay, in grassland. Elevations: 10-1345ft. (3-410m.) Blooms Feb-Apr.
Grimmia torenii Toren's grimmia	None/None G2/S2 1B.3	Moss. Chaparral, cismontane woodland, lower montane coniferous forest. Openings, rocky, boulder and rock walls, serpentine, volcanic. Elevations: 1065-3805ft. (325-1160m.)
Helianthella castanea Diablo helianthella	None/None G2/S2 1B.2	Perennial herb. Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Azonal soils, Partial shade (often), rocky (usually). Elevations: 195-4265ft. (60-1300m.) Blooms Mar-Jun.

Hesperolinon breweri Brewer's western flax	None/None G2/S2 1B.2	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Often in rocky serpentine soil in serpentine chaparral and serpentine grassland. Elevations: 100-3100ft. (30-945m.) Blooms May-Jul.
Hoita strobilina Loma Prieta hoita	None/None G2?/S2? 1B.1	Perennial herb. Chaparral, cismontane woodland, riparian woodland. Serpentine; mesic sites. Elevations: 100-2820ft. (30-860m.) Blooms May-Jul(Aug-Oct).
Holocarpha macradenia Santa Cruz tarplant	FT/SCE G1/S1 1B.1	Annual herb. Coastal prairie, coastal scrub, valley and foothill grassland. Light, sandy soil or sandy clay; often with nonnatives. Elevations: 35-720ft. (10-220m.) Blooms Jun-Oct.
Isocoma arguta Carquinez goldenbush	None/None G1/S1 1B.1	Perennial shrub. Valley and foothill grassland. Alkaline soils, flats, lower hills. On low benches near drainages and on tops and sides of mounds in swale habitat. Elevations: 5-65ft. (1-20m.) Blooms Aug-Dec.
Lasthenia conjugens Contra Costa goldfields	FE/None G1/S1 1B.1	Annual herb. Cismontane woodland, playas, valley and foothill grassland, vernal pools. Vernal pools, swales, low depressions, in open grassy areas. Elevations: 0-1540ft. (0-470m.) Blooms Mar-Jun.
Madia radiata showy golden madia	None/None G3/S3 1B.1	Annual herb. Cismontane woodland, valley and foothill grassland. Mostly on adobe clay in grassland or among shrubs. Elevations: 80-3985ft. (25-1215m.) Blooms Mar-May.
Malacothamnus hallii Hall's bush-mallow	None/None G2/S2 1B.2	Perennial deciduous shrub. Chaparral, coastal scrub. Some populations on serpentine. Elevations: 35-2495ft. (10-760m.) Blooms (Apr)May-Sep(Oct).
Monolopia gracilens woodland woollythreads	None/None G3/S3 1B.2	Annual herb. Broadleafed upland forest, chaparral, cismontane woodland, north coast coniferous forest, valley and foothill grassland. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns but may have only weak affinity to serpentine. Elevations: 330-3935ft. (100-1200m.) Blooms (Feb)Mar-Jul.
Navarretia gowenii Lime Ridge navarretia	None/None G1/S1 1B.1	Annual herb. Chaparral. On calcium carbonate-rich soil with high clay content. Elevations: 590-1000ft. (180-305m.) Blooms May-Jun.
Navarretia nigelliformis ssp. *radians* shining navarretia	None/None G4T2/S2 1B.2	Annual herb. Cismontane woodland, valley and foothill grassland, vernal pools. Apparently in grassland, and not necessarily in vernal pools. Elevations: 215-3280ft. (65-1000m.) Blooms (Mar)Apr-Jul.
Navarretia prostrata prostrate vernal pool navarretia	None/None G2/S2 1B.2	Annual herb. Coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. Elevations: 10-3970ft. (3-1210m.) Blooms Apr-Jul.

Oenothera deltoides ssp. *howellii* Antioch Dunes evening-primrose	FE/SCE G5T1/S1 1B.1	Perennial herb. Inland dunes. Remnant river bluffs and sand dunes east of Antioch. Elevations: 0-100ft. (0-30m.) Blooms Mar-Sep.
Phacelia phacelioides Mt. Diablo phacelia	None/None G2/S2 1B.2	Annual herb. Chaparral, cismontane woodland. Adjacent to trails, on rock outcrops and talus slopes; sometimes on serpentine. Elevations: 1640-4495ft. (500-1370m.) Blooms Apr-May.
Plagiobothrys glaber hairless popcornflower	None/None GX/SX 1A	Annual herb. Marshes and swamps, meadows and seeps. Coastal salt marshes and alkaline meadows. Elevations: 50-590ft. (15-180m.) Blooms Mar-May.
Polemonium carneum Oregon polemonium	None/None G3G4/S2 2B.2	Perennial herb. Coastal prairie, coastal scrub, lower montane coniferous forest. Elevations: 0-6005ft. (0-1830m.) Blooms Apr-Sep.
Puccinellia simplex California alkali grass	None/None G3/S2 1B.2	Annual herb. Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools. Alkaline, vernally mesic. Sinks, flats, and lake margins. Elevations: 5-3050ft. (2-930m.) Blooms Mar-May.
Sanicula saxatilis rock sanicle	None/SCR G2/S2 1B.2	Perennial herb. Broadleafed upland forest, chaparral, valley and foothill grassland. Bedrock outcrops and talus slopes in chaparral or oak woodland habitat. Elevations: 2035-3855ft. (620-1175m.) Blooms Apr-May.
Senecio aphanactis chaparral ragwort	None/None G3/S2 2B.2	Annual herb. Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. Elevations: 50-2625ft. (15-800m.) Blooms Jan-Apr(May).
Spergularia macrotheca var. *longistyla* long-styled sand-spurrey	None/None G5T2/S2 1B.2	Perennial herb. Marshes and swamps, meadows and seeps. Alkaline. Elevations: 0-835ft. (0-255m.) Blooms Feb-May.
Streptanthus albidus ssp. *peramoenus* most beautiful jewelflower	None/None G2T2/S2 1B.2	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Serpentine outcrops, on ridges and slopes. Elevations: 310-3280ft. (95-1000m.) Blooms (Mar)Apr-Sep(Oct).
Streptanthus hispidus Mt. Diablo jewelflower	None/None G2/S2 1B.3	Annual herb. Chaparral, valley and foothill grassland. Talus or rocky outcrops. Elevations: 1200-3935ft. (365-1200m.) Blooms Mar-Jun.
Stuckenia filiformis ssp. *alpina* northern slender pondweed	None/None G5T5/S2S3 2B.2	Perennial rhizomatous herb (aquatic). Marshes and swamps. Shallow, clear water of lakes and drainage channels. Elevations: 985-7055ft. (300-2150m.) Blooms May-Jul.
Suaeda californica California seablite	FE/None G1/S1 1B.1	Perennial evergreen shrub. Marshes and swamps. Margins of coastal salt marshes. Elevations: 0-50ft. (0-15m.) Blooms Jul-Oct.
Trifolium hydrophilum saline clover	None/None G2/S2 1B.2	Annual herb. Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. Elevations: 0-985ft. (0-300m.) Blooms Apr-Jun.
Triquetrella californica coastal triquetrella	None/None G2/S2 1B.2	Moss. Coastal bluff scrub, coastal scrub. Grows within 30m from the coast in coastal scrub, grasslands and in open gravels on roadsides,

		hillsides, rocky slopes, and fields. On gravel or thin soil over outcrops. Elevations: 35-330ft. (10-100m.)
Tropidocarpum capparideum caper-fruited tropidocarpum	None/None G1/S1 1B.1	Annual herb. Valley and foothill grassland. Alkaline clay. Elevations: 5-1495ft. (1-455m.) Blooms Mar-Apr.
Viburnum ellipticum oval-leaved viburnum	None/None G4G5/S3? 2B.3	Perennial deciduous shrub. Chaparral, cismontane woodland, lower montane coniferous forest. Elevations: 705-4595ft. (215-1400m.) Blooms May-Jun.
Invertebrates		
Bombus crotchii Crotch bumble bee	None/SC G3G4/S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia*, and *Eriogonum*.
Bombus occidentalis western bumble bee	None/SC G2G3/S1	Once common and widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.
Branchinecta lynchi vernal pool fairy shrimp	FT/None G3/S3	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.
Danaus plexippus pop. 1 monarch - California overwintering population	FC/None G4T2T3/S2S3	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.
Lepidurus packardi vernal pool tadpole shrimp	FE/None G4/S3S4	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass-bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.
Fish		
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	FT/None G5T2T3Q/S2S3	DPS includes all naturally spawned populations of steelhead (and their progeny) in streams from the Russian River to Aptos Creek, Santa Cruz County, California (inclusive). Also includes the drainages of San Francisco and San Pablo Bays.
Spirinchus thaleichthys longfin smelt	FC/ST G5/S1	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt but can be found in completely freshwater to almost pure seawater.
Amphibians		
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	FT/ST G2G3/S3 WL	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats. Need underground refuges, especially ground squirrel

		burrows, and vernal pools or other seasonal water sources for breeding.
Rana boylii foothill yellow-legged frog	None/SE G3/S3 SSC	Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.
Rana draytonii California red-legged frog	FT/None G2G3/S2S3 SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.
Reptiles		
Anniella pulchra Northern California legless lizard	None/None G3/S3 SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.
Emys marmorata western pond turtle	None/None G3G4/S3 SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.
Masticophis lateralis euryxanthus Alameda whipsnake	FT/ST G4T2/S2	Typically found in chaparral and scrub habitats but will also use adjacent grassland, oak savanna, and woodland habitats. Mostly south-facing slopes and ravines, with rock outcrops, deep crevices, or abundant rodent burrows, where shrubs form a vegetative mosaic with oak trees and grasses.
Phrynosoma blainvillii coast horned lizard	None/None G3G4/S3S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.
Birds		
Accipiter cooperii Cooper's hawk	None/None G5/S4 WL	Woodland, chiefly of open, interrupted, or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks.
Accipiter striatus sharp-shinned hawk	None/None G5/S4 WL	Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers riparian areas. North-facing slopes with plucking perches are critical requirements. Nests usually within 275 ft of water.
Agelaius tricolor tricolored blackbird	None/ST G1G2/S1S2 SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected

		nesting substrate, and foraging area with insect prey within a few km of the colony.
Aquila chrysaetos golden eagle	None/None G5/S3 FP WL	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.
Athene cunicularia burrowing owl	None/None G4/S3 SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.
Buteo regalis ferruginous hawk	None/None G4/S3S4 WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.
Buteo swainsoni Swainson's hawk	None/ST G5/S3	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.
Charadrius nivosus nivosus western snowy plover	FT/None G3T3/S2 SSC	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.
Circus hudsonius northern harrier	None/None G5/S3 SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.
Coturnicops noveboracensis yellow rail	None/None G4/S1S2 SSC	Summer resident in eastern Sierra Nevada in Mono County. Freshwater marshlands.
Elanus leucurus white-tailed kite	None/None G5/S3S4 FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.
Eremophila alpestris actia California horned lark	None/None G5T4Q/S4 WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also, main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.
Falco mexicanus prairie falcon	None/None G5/S4 WL	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.
Falco peregrinus anatum American peregrine falcon	FD/SD G4T4/S3S4 FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.

Geothlypis trichas sinuosa saltmarsh common yellowthroat	None/None G5T3/S3 SSC	Resident of the San Francisco Bay region, in fresh and saltwater marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.
Laterallus jamaicensis coturniculus California black rail	None/ST G3G4T1/S1 FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.
Melospiza melodia pusillula Alameda song sparrow	None/None G5T2?/S2S3 SSC	Resident of salt marshes bordering south arm of San Francisco Bay. Inhabits Salicornia marshes; nests low in Grindelia bushes (high enough to escape high tides) and in Salicornia.
Rallus obsoletus obsoletus California Ridgway's rail	FE/SE G3T1/S1 FP	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed but feeds away from cover on invertebrates from mud-bottomed sloughs.
Riparia riparia bank swallow	None/ST G5/S2	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.
Setophaga petechia yellow warbler	None/None G5/S3S4 SSC	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.
Sternula antillarum browni California least tern	FE/SE G4T2T3Q/S2 FP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.
Mammals		
Antrozous pallidus pallid bat	None/None G4/S3 SSC	Found in a variety of habitats including deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts in crevices of rock outcrops, caves, mine tunnels, buildings, bridges, and hollows of live and dead trees which must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.
Corynorhinus townsendii Townsend's big-eared bat	None/None G4/S2 SSC	Occurs throughout California in a wide variety of habitats. Most common in mesic sites, typically coniferous or deciduous forests. Roosts in the open, hanging from walls, ceilings in caves, lava tubes, bridges, and buildings. This species is extremely sensitive to human disturbance.

Eumops perotis californicus western mastiff bat	None/None G4G5T4/S3S4 SSC	Occurs in open, semi-arid to arid habitats, including coniferous and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces and caves, and buildings. Roosts typically occur high above ground.
Lasiurus blossevillii western red bat	None/None G4/S3 SSC	Roosts in trees in forests and woodlands of varying elevations. Forages in grasslands, shrublands, open woodlands and forests, and agriculture. Typically found in riparian habitats, does not occur in deserts.
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	None/None G5T2T3/S2S3 SSC	Typically found in forest habitats with moderate to dense understory. Can occur in chaparral, riparian woodlands, and coniferous forests, particularly redwood. Builds middens out of grasses, leaves, and woody debris. This subspecies is found only in the San Francisco Bay region.
Puma concolor Mountain lion	None/None Provisionally listed	Found across California, often in areas where deer are present. Prime habitat includes foothills and mountains.
Reithrodontomys raviventris salt-marsh harvest mouse	FE/SE G1G2/S1S2 FP	Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat but may occur in other marsh vegetation types and in adjacent upland areas. Does not burrow; builds loosely organized nests. Requires higher areas for flood escape.
Sorex vagrans halicoetes salt-marsh wandering shrew	None/None G5T1/S1 SSC	Salt marshes of the south arm of San Francisco Bay. Medium high marsh 6-8 ft above sea level where abundant driftwood is scattered among Salicornia.
Taxidea taxus American badger	None/None G5/S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.
Vulpes macrotis mutica San Joaquin kit fox	FE/ST G4T2/S2	Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.

FT = Federally Threatened
FC = Federal Candidate Species
FE = Federally Endangered
FS = Federally Sensitive
DL = Delisted
SSC = CDFW Species of Special Concern
SE = State Endangered
ST = State Threatened
SR = State Rare
SS = State Sensitive
SC = State Candidate
FP = Fully Protected

G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDB RareFind5

CRPR (California Rare Plant Rank):

1A=Presumed Extinct in California
1B=Rare, Threatened, or Endangered in California and elsewhere
2=Rare, Threatened, or Endangered in California, but more common elsewhere
3=Need more information (a Review List)
4=Plants of Limited Distribution (a Watch List)

CRPR Threat Code Extension:

.1=Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2=Fairly endangered in California (20-80% occurrences threatened)

.3=Not very endangered in California (<20% of occurrences threatened)

Sources: CNDDB (CDFW, 2022a); USFWS (2022a), CDFW Special Animals List (2021). CDFW Special Plants List (2021) and CNPS Rare Plant Inventory (2022)

Appendix C

Energy Calculations

San Ramon 2040 General Plan - Existing (2022)

Last Updated: June 5, 2023

Populate one of the following tables (Leave the other blank):

Annual VMT		OR	Daily Vehicle Trips	
Annual VMT:	4,491,900		Daily Vehicle Trips:	
			Average Trip Distance:	

Fleet Class	Fleet Mix
Light Duty Auto (LDA)	0.553951
Light Duty Truck 1 (LDT1)	0.056244
Light Duty Truck 2 (LDT2)	0.181537
Medium Duty Vehicle (MDV)	0.131938
Light Heavy Duty 1 (LHD1)	0.024760
Light Heavy Duty 2 (LHD2)	0.005449
Medium Heavy Duty (MHD)	0.007285
Heavy Heavy Duty (HHD)	0.007018
Other Bus (OBUS)	0.000560
Urban Bus (UBUS)	0.000348
Motorcycle (MCY)	0.026165
School Bus (SBUS)	0.001150
Motorhome (MH)	0.003595

Fuel Economy (MPG) [1]	
Passenger Vehicles	25.3
Light-Med Duty Trucks	18.6
Heavy Trucks/Other	7.6
Motorcycles	44

Fleet Mix

Vehicle Type	Percent	Fuel Type	Annual VMT: VMT	Vehicle Trips: VMT	Fuel Consumption (Gallons)
Passenger Vehicles	*55.40%*	*Gasoline*	2,488,292	0.00	98,351
Light-Medium Duty Trucks	*36.97%*	*Gasoline*	1,660,741	0.00	89,287
Heavy Trucks/Other	*5.02%*	*Diesel*	225,336	0.00	29,649
Motorcycle	*2.62%*	*Gasoline*	117,531	0.00	2,671

Total Gasoline Consumption (gallons)	**190,310**
Total Diesel Consumption (gallons)	**29,649**

Sources:

[1] United States Department of Transportation, Bureau of Transportation Statistics. 2021. National Transportation Statistics. Available at: https://www.bts.gov/topics/national-transportation-statistics.

San Ramon 2040 General Plan - Buildout (2040)

Last Updated: June 5, 2023

Populate one of the following tables (Leave the other blank):

Annual VMT		OR	Daily Vehicle Trips	
Annual VMT:	5,313,500		Daily Vehicle Trips:	
			Average Trip Distance:	

Fleet Class	Fleet Mix
Light Duty Auto (LDA)	0.586846
Light Duty Truck 1 (LDT1)	0.055769
Light Duty Truck 2 (LDT2)	0.172135
Medium Duty Vehicle (MDV)	0.114924
Light Heavy Duty 1 (LHD1)	0.020756
Light Heavy Duty 2 (LHD2)	0.005707
Medium Heavy Duty (MHD)	0.006953
Heavy Heavy Duty (HHD)	0.006514
Other Bus (OBUS)	0.000528
Urban Bus (UBUS)	0.000264
Motorcycle (MCY)	0.024576
School Bus (SBUS)	0.002469
Motorhome (MH)	0.002558

Fuel Economy (MPG) [1]	
Passenger Vehicles	25.3
Light-Med Duty Trucks	18.6
Heavy Trucks/Other	7.6
Motorcycles	44

Fleet Mix

Vehicle Type	Percent	Fuel Type	Annual VMT: VMT	Vehicle Trips: VMT	Fuel Consumption (Gallons)
Passenger Vehicles	*58.68%*	*Gasoline*	3,118,206	0.00	123,249
Light-Medium Duty Trucks	*34.28%*	*Gasoline*	1,821,617	0.00	97,936
Heavy Trucks/Other	*4.57%*	*Diesel*	243,087	0.00	31,985
Motorcycle	*2.46%*	*Gasoline*	130,585	0.00	2,968

Total Gasoline Consumption (gallons)	**224,153**
Total Diesel Consumption (gallons)	**31,985**

Sources:

[1] United States Department of Transportation, Bureau of Transportation Statistics. 2021. National Transportation Statistics. Available at: https://www.bts.gov/topics/national-transportation-statistics.

Appendix D

Noise Calculations

Traffic Noise Calculator: FHWA 77-108 **Project Title: San Ramon General Plan - EXISTING**

	Output						Inputs														Auto Inputs	
	dBA at 50 feet			Distance to CNEL Contour																		
ID	$L_{eq\text{-}24hr}$	L_{dn}	CNEL	70 dBA	65 dBA	60 dBA	Roadway	Segment	ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Reciever	Ground Absorption	Lane Distance
1	65.5	67.4	68.1	37	80	172	Crow Canyon Road	on Road and San	16,445	40	0.0%	97.0%	2.9%	0.1%	82.0%	12.0%	6.0%	6	Soft	50	0.5	68
2	69.5	71.4	72.1	69	149	320	Crow Canyon Road	Valley Boulevard	35,037	40	0.0%	96.0%	3.0%	1.0%	82.0%	12.0%	6.0%	6	Soft	50	0.5	68
3	68.5	70.4	71.1	59	127	274	Crow Canyon Road	anyon Place and	30,770	40	0.0%	98.0%	1.0%	1.0%	82.0%	12.0%	6.0%	6	Soft	50	0.5	68
4	66.5	68.4	69.1	43	94	202	Crow Canyon Road	a Boulevard and	23,063	40	0.0%	98.0%	1.9%	0.1%	82.0%	12.0%	6.0%	4	Soft	50	0.5	44
5	69.4	71.3	72.0	68	146	315	Bollinger Canyon Road	y Boulevard and	45,293	40	0.0%	99.0%	0.9%	0.1%	82.0%	12.0%	6.0%	6	Soft	50	0.5	68
6	69.3	71.1	71.8	66	142	306	Bollinger Canyon Road	e/Chevron Drive	36,284	40	0.0%	98.0%	1.0%	1.0%	82.0%	12.0%	6.0%	6	Soft	50	0.5	68
7	68.9	70.7	71.4	62	134	288	Bollinger Canyon Road	ulevard and Dou	33,359	40	0.0%	97.0%	1.0%	1.0%	82.0%	12.0%	6.0%	6	Soft	50	0.5	68
8	65.2	67.1	67.7	35	76	164	Bollinger Canyon Road	ulevard (N) and I	15,115	40	0.0%	97.0%	1.0%	1.0%	82.0%	12.0%	6.0%	4	Soft	50	0.5	44
9	68.2	70.1	70.8	56	122	262	Dougherty Boulevard	on Roadand Bolli	18,508	50	0.0%	99.0%	0.9%	0.1%	82.0%	12.0%	6.0%	6	Soft	50	0.5	68
10	66.7	68.6	69.2	45	96	207	Dougherty Boulevard	oad (N) and Bollir	11,793	50	0.0%	98.0%	1.3%	0.7%	82.0%	12.0%	6.0%	6	Soft	50	0.5	68
11	69.9	71.8	72.5	73	158	340	Dougherty Boulevard	ger Canyon Road	24,244	50	0.0%	98.0%	1.0%	1.0%	82.0%	12.0%	6.0%	6	Soft	50	0.5	68
12	64.6	66.5	67.2	32	70	150	n Ramon Valley Boulev	y Limit and Crow	16,161	35	0.0%	96.0%	3.0%	1.0%	82.0%	12.0%	6.0%	4	Soft	50	0.5	44
13	65.3	67.2	67.9	36	78	168	n Ramon Valley Boulev	nyon Road and N	19,041	35	0.0%	96.0%	3.0%	1.0%	82.0%	12.0%	6.0%	4	Soft	50	0.5	44
14	63.4	65.3	66.0	27	58	125	n Ramon Valley Boulev	yon Road and Bo	12,252	35	0.0%	96.0%	3.0%	1.0%	82.0%	12.0%	6.0%	4	Soft	50	0.5	44
15	62.4	64.2	64.9	23	49	106	n Ramon Valley Boulev	Canyon Road an	12,548	35	0.0%	98.0%	1.9%	0.1%	82.0%	12.0%	6.0%	4	Soft	50	0.5	44
16	55.4	57.3	58.0	8	17	37	Norris Canyon Road	imit and Bolling	4,729	25	0.0%	98.0%	1.0%	1.0%	82.0%	12.0%	6.0%	2	Soft	50	0.5	20
17	55.6	57.5	58.2	8	18	38	Norris Canyon Road	on Road and San	4,986	25	0.0%	98.0%	1.0%	1.0%	82.0%	12.0%	6.0%	2	Soft	50	0.5	20
18	62.9	64.8	65.4	25	53	115	Norris Canyon Road	Valley Boulevard	10,579	40	0.0%	99.0%	0.9%	0.1%	82.0%	12.0%	6.0%	4	Soft	50	0.5	44
19	62.8	64.7	65.3	24	53	114	Camino Ramon	ria Way and Cro	11,921	35	0.0%	98.0%	1.0%	1.0%	82.0%	12.0%	6.0%	4	Soft	50	0.5	44
20	63.8	65.7	66.4	29	62	133	Camino Ramon	nyon Road and N	14,234	35	0.0%	97.0%	2.0%	1.0%	82.0%	12.0%	6.0%	4	Soft	50	0.5	44
21	62.0	63.9	64.6	22	47	101	Camino Ramon	yon Road and Bo	9,380	35	0.0%	97.0%	2.0%	1.0%	82.0%	12.0%	6.0%	4	Soft	50	0.5	44
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	Calculation Area															
	Vehicles per Hour									Reference Level			Distance Adjustments			
ID	Daytime Autos	Daytime Med Truck	Daytime Heavy	Evening Autos	Evening Med Truck	Evening Heavy	Night Autos	Night Med Truck	Night Heavy	Autos	Med Trucks	Heavy Trucks	Equivalent Lane Distance	Distance Ref	Distance Propag	Heavy Truck Grade
1	1090.0	32.6	0.6	638.1	19.1	0.3	106.3	3.2	0.1	67.4	76.3	81.2	94.0	-4.2	4.5	0
2	2298.4	71.8	23.9	1345.4	42.0	14.0	224.2	7.0	2.3	67.4	76.3	81.2	94.0	-4.2	4.5	0
3	2060.6	21.0	21.0	1206.2	12.3	12.3	201.0	2.1	2.1	67.4	76.3	81.2	94.0	-4.2	4.5	0
4	1544.5	29.9	1.6	904.1	17.5	0.9	150.7	2.9	0.2	67.4	76.3	81.2	97.5	-4.5	4.5	0
5	3064.1	27.9	3.1	1793.6	16.3	1.8	298.9	2.7	0.3	67.4	76.3	81.2	94.0	-4.2	4.5	0
6	2429.8	24.8	24.8	1422.3	14.5	14.5	237.1	2.4	2.4	67.4	76.3	81.2	94.0	-4.2	4.5	0
7	2211.1	22.8	22.8	1294.3	13.3	13.3	215.7	2.2	2.2	67.4	76.3	81.2	94.0	-4.2	4.5	0
8	1001.9	10.3	10.3	586.5	6.0	6.0	97.7	1.0	1.0	67.4	76.3	81.2	97.5	-4.5	4.5	0
9	1252.1	11.4	1.3	732.9	6.7	0.7	122.2	1.1	0.1	71.1	78.8	83.0	94.0	-4.2	4.5	0
10	789.7	10.5	5.6	462.3	6.1	3.3	77.0	1.0	0.6	71.1	78.8	83.0	94.0	-4.2	4.5	0
11	1623.5	16.6	16.6	950.4	9.7	9.7	158.4	1.6	1.6	71.1	78.8	83.0	94.0	-4.2	4.5	0
12	1060.2	33.1	11.0	620.6	19.4	6.5	103.4	3.2	1.1	65.1	74.8	80.0	97.5	-4.5	4.5	0
13	1249.1	39.0	13.0	731.2	22.8	7.6	121.9	3.8	1.3	65.1	74.8	80.0	97.5	-4.5	4.5	0
14	803.7	25.1	8.4	470.5	14.7	4.9	78.4	2.5	0.8	65.1	74.8	80.0	97.5	-4.5	4.5	0
15	840.3	16.3	0.9	491.9	9.5	0.5	82.0	1.6	0.1	65.1	74.8	80.0	97.5	-4.5	4.5	0
16	316.7	3.2	3.2	185.4	1.9	1.9	30.9	0.3	0.3	59.4	71.1	77.2	99.5	-4.6	4.5	0
17	333.9	3.4	3.4	195.5	2.0	2.0	32.6	0.3	0.3	59.4	71.1	77.2	99.5	-4.6	4.5	0
18	715.7	6.5	0.7	418.9	3.8	0.4	69.8	0.6	0.1	67.4	76.3	81.2	97.5	-4.5	4.5	0
19	798.3	8.1	8.1	467.3	4.8	4.8	77.9	0.8	0.8	65.1	74.8	80.0	97.5	-4.5	4.5	0
20	943.5	19.5	9.7	552.3	11.4	5.7	92.0	1.9	0.9	65.1	74.8	80.0	97.5	-4.5	4.5	0
21	621.7	12.8	6.4	363.9	7.5	3.8	60.7	1.3	0.6	65.1	74.8	80.0	97.5	-4.5	4.5	0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
37	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
43	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
46	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
48	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
51	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
53	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
58	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
61	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
63	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
64	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
71	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
77	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
81	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
87	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
88	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
102	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
103	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
104	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
105	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
107	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
108	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
109	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
111	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
112	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
113	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
114	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
115	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
116	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
117	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
118	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
119	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
120	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
121	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
122	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
123	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
124	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
126	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
127	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
128	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
129	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
130	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
131	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
132	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
133	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
134	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
135	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
136	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
137	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
138	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
139	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
140	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
141	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
142	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
143	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
144	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
145	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
146	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
147	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
148	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
149	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
150	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
151	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
152	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
153	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
154	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
155	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
156	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
157	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
158	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
159	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
160	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
161	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
162	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
163	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
164	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
165	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
166	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
167	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
168	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
169	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
170	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
171	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
172	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
173	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
174	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
175	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
176	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0

	Flow: Daytime			Flow: Evening			Flow: Night			Totals: Daytime			Totals: Evening			Totals: Night			Time of Day Averages		
ID	Autos	Med Truck	Heavy Truck	Autos	Med Truck	Heavy Truck	Autos	Med Truck	Heavy Truck	Autos	Med Truck	Heavy Truck	Autos	Med Truck	Heavy Truck	Autos	Med Truck	Heavy Truck	Day Leq	Evening Leq	Night Leq
1	-1.0	-16.2	-33.8	-3.3	-18.5	-36.2	-11.1	-26.3	-43.9	66.7	60.4	47.6	64.4	58.1	45.3	56.6	50.3	37.5	67.7	65.3	57.6
2	2.3	-12.8	-17.5	0.0	-15.1	-19.9	-7.8	-22.9	-27.6	69.9	63.8	63.9	67.6	61.5	61.6	59.8	53.7	53.8	71.7	69.4	61.6
3	1.8	-18.1	-18.1	-0.5	-20.4	-20.4	-8.3	-28.2	-28.2	69.5	58.5	63.4	67.1	56.2	61.0	59.4	48.4	53.2	70.7	68.4	60.6
4	0.6	-16.6	-29.4	-1.8	-18.9	-31.7	-9.5	-26.7	-39.5	68.0	59.8	51.9	65.7	57.5	49.5	57.9	49.7	41.8	68.7	66.4	58.6
5	3.5	-16.9	-26.4	1.2	-19.2	-28.7	-6.6	-27.0	-36.5	71.2	59.7	55.0	68.9	57.4	52.7	61.1	49.6	44.9	71.6	69.3	61.5
6	2.5	-17.4	-17.4	0.2	-19.7	-19.7	-7.6	-27.5	-27.5	70.2	59.2	64.1	67.9	56.9	61.7	60.1	49.1	54.0	71.4	69.1	61.3
7	2.1	-17.7	-17.7	-0.2	-20.1	-20.1	-8.0	-27.9	-27.9	69.8	58.9	63.7	67.4	56.5	61.4	59.7	48.8	53.6	71.0	68.7	60.9
8	-1.3	-21.2	-21.2	-3.6	-23.5	-23.5	-11.4	-31.3	-31.3	66.1	55.2	60.0	63.8	52.9	57.7	56.0	45.1	49.9	67.3	65.0	57.2
9	-1.3	-21.7	-31.3	-3.6	-24.1	-33.6	-11.4	-31.8	-41.4	70.1	57.4	52.0	67.8	55.0	49.7	60.0	47.2	41.9	70.4	68.1	60.3
10	-3.3	-22.1	-24.8	-5.6	-24.4	-27.1	-13.4	-32.2	-34.9	68.1	57.0	58.5	65.8	54.7	56.2	58.0	46.9	48.4	68.8	66.5	58.7
11	-0.2	-20.1	-20.1	-2.5	-22.4	-22.4	-10.3	-30.2	-30.2	71.2	59.0	63.2	68.9	56.7	60.9	61.1	48.9	53.1	72.1	69.8	62.0
12	-0.5	-15.5	-20.3	-2.8	-17.9	-22.6	-10.6	-25.7	-30.4	64.7	59.3	59.8	62.3	57.0	57.5	54.6	49.2	49.7	66.8	64.4	56.7
13	0.2	-14.8	-19.6	-2.1	-17.2	-21.9	-9.9	-24.9	-29.7	65.4	60.1	60.5	63.1	57.7	58.2	55.3	49.9	50.4	67.5	65.1	57.4
14	-1.7	-16.7	-21.5	-4.0	-19.1	-23.8	-11.8	-26.9	-31.6	63.5	58.1	58.6	61.1	55.8	56.3	53.4	48.0	48.5	65.6	63.2	55.5
15	-1.5	-18.6	-31.4	-3.8	-21.0	-33.7	-11.6	-28.7	-41.5	63.7	56.3	48.7	61.3	53.9	46.4	53.6	46.2	38.6	64.5	62.2	54.4
16	-4.3	-24.2	-24.2	-6.6	-26.5	-26.5	-14.4	-34.3	-34.3	55.1	46.8	53.0	52.8	44.5	50.7	45.0	36.7	42.9	57.6	55.2	47.4
17	-4.0	-24.0	-24.0	-6.4	-26.3	-26.3	-14.2	-34.1	-34.1	55.3	47.1	53.2	53.0	44.7	50.9	45.2	36.9	43.1	57.8	55.5	47.7
18	-2.8	-23.2	-32.7	-5.1	-25.5	-35.1	-12.9	-33.3	-42.8	64.6	53.2	48.5	62.3	50.9	46.2	54.5	43.1	38.4	65.0	62.7	54.9
19	-1.7	-21.6	-21.6	-4.1	-24.0	-24.0	-11.8	-31.7	-31.7	63.4	53.2	58.5	61.1	50.9	56.1	53.3	43.1	48.4	64.9	62.6	54.8
20	-1.0	-17.9	-20.9	-3.3	-20.2	-23.2	-11.1	-28.0	-31.0	64.2	57.0	59.2	61.8	54.7	56.9	54.1	46.9	49.1	66.0	63.6	55.9
21	-2.8	-19.7	-22.7	-5.1	-22.0	-25.0	-12.9	-29.8	-32.8	62.4	55.2	57.4	60.0	52.9	55.1	52.2	45.1	47.3	64.2	61.8	54.1
22	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
23	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
24	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
25	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
26	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
27	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
28	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
29	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
30	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
31	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
32	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
33	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
34	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
35	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
36	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
37	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
38	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
39	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
40	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
41	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
42	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
43	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
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137	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
138	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
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Traffic Noise Calculator: FHWA 77-108

Project Title: San Ramon General Plan - FUTURE

	Output						Inputs													
	dBA at 50 feet			Distance to CNEL Contour																
ID	$L_{eq\text{-}24hr}$	L_{dn}	CNEL	70 dBA	65 dBA	60 dBA	Roadway	Segment	ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Reciever
1	66.2	68.1	68.8	41	89	193	Crow Canyon Road	on Road and San	19,400	40	0.0%	97.0%	2.9%	0.1%	82.0%	12.0%	6.0%	6	Soft	50
2	70.5	72.4	73.1	80	173	372	Crow Canyon Road	Valley Boulevard a	43,900	40	0.0%	96.0%	3.0%	1.0%	82.0%	12.0%	6.0%	6	Soft	50
3	69.0	70.9	71.5	63	136	293	Crow Canyon Road	anyon Place and A	34,000	40	0.0%	98.0%	1.0%	1.0%	82.0%	12.0%	6.0%	6	Soft	50
4	67.5	69.3	70.0	50	108	232	Crow Canyon Road	ta Boulevard and D	28,500	40	0.0%	98.0%	1.9%	0.1%	82.0%	12.0%	6.0%	4	Soft	50
5	69.8	71.7	72.4	72	155	335	Bollinger Canyon Road	y Boulevard and S	49,600	40	0.0%	99.0%	0.9%	0.1%	82.0%	12.0%	6.0%	6	Soft	50
6	69.5	71.3	72.0	68	147	316	Bollinger Canyon Road	e/Chevron Drive a	38,000	40	0.0%	98.0%	1.0%	1.0%	82.0%	12.0%	6.0%	6	Soft	50
7	69.1	70.9	71.6	64	138	297	Bollinger Canyon Road	oulevard and Doug	34,900	40	0.0%	97.0%	1.0%	1.0%	82.0%	12.0%	6.0%	6	Soft	50
8	65.9	67.8	68.5	40	85	183	Bollinger Canyon Road	oulevard (N) and D	17,900	40	0.0%	97.0%	1.0%	1.0%	82.0%	12.0%	6.0%	4	Soft	50
9	69.5	71.4	72.0	68	147	317	Dougherty Boulevard	on Road and Bollin	24,700	50	0.0%	99.0%	0.9%	0.1%	82.0%	12.0%	6.0%	6	Soft	50
10	68.3	70.2	70.9	57	123	266	Dougherty Boulevard	oad (N) and Bollin	17,200	50	0.0%	98.0%	1.3%	0.7%	82.0%	12.0%	6.0%	6	Soft	50
11	70.8	72.7	73.4	84	181	391	Dougherty Boulevard	ger Canyon Road (	29,900	50	0.0%	98.0%	1.0%	1.0%	82.0%	12.0%	6.0%	6	Soft	50
12	66.3	68.2	68.9	42	91	196	an Ramon Valley Bouleva	y Limit and Crow C	24,100	35	0.0%	96.0%	3.0%	1.0%	82.0%	12.0%	6.0%	4	Soft	50
13	66.4	68.3	68.9	42	91	197	an Ramon Valley Bouleva	anyon Road and N	24,300	35	0.0%	96.0%	3.0%	1.0%	82.0%	12.0%	6.0%	4	Soft	50
14	65.0	66.8	67.5	34	74	158	an Ramon Valley Bouleva	nyon Road and Bo	17,500	35	0.0%	96.0%	3.0%	1.0%	82.0%	12.0%	6.0%	4	Soft	50
15	64.6	66.5	67.2	32	70	150	an Ramon Valley Bouleva	Canyon Road and	21,100	35	0.0%	98.0%	1.9%	0.1%	82.0%	12.0%	6.0%	4	Soft	50
16	56.8	58.7	59.3	10	21	45	Norris Canyon Road	Limit and Bollinge	6,500	25	0.0%	98.0%	1.0%	1.0%	82.0%	12.0%	6.0%	2	Soft	50
17	57.0	58.9	59.6	10	22	47	Norris Canyon Road	on Road and San	6,900	25	0.0%	98.0%	1.0%	1.0%	82.0%	12.0%	6.0%	2	Soft	50
18	64.5	66.4	67.1	32	69	148	Norris Canyon Road	Valley Boulevard a	15,400	40	0.0%	99.0%	0.9%	0.1%	82.0%	12.0%	6.0%	4	Soft	50
19	63.8	65.6	66.3	28	61	132	Camino Ramon	oria Way and Crov	14,900	35	0.0%	98.0%	1.0%	1.0%	82.0%	12.0%	6.0%	4	Soft	50
20	66.2	68.0	68.7	41	88	190	Camino Ramon	anyon Road and N	24,400	35	0.0%	97.0%	2.0%	1.0%	82.0%	12.0%	6.0%	4	Soft	50
21	65.6	67.4	68.1	37	81	173	Camino Ramon	nyon Road and Bo	21,200	35	0.0%	97.0%	2.0%	1.0%	82.0%	12.0%	6.0%	4	Soft	50
22	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!														
23	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!														
24	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!														
25	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!														
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	Auto Inputs		Calculation Area															
			Vehicles per Hour									Reference Level			Distance Adjustments			
ID	Ground Absorption	Lane Distance	Daytime Autos	Daytime Med Truck	Daytime Heavy	Evening Autos	Evening Med Truck	Evening Heavy	Night Autos	Night Med Truck	Night Heavy	Autos	Med Trucks	Heavy Trucks	Equivalent Lane Distance	Distance Ref	Distance Propag	Heavy Truck Grade
1	0.5	68	1285.9	38.4	0.7	752.7	22.5	0.4	125.5	3.8	0.1	67.4	76.3	81.2	94.0	-4.2	4.5	0
2	0.5	68	2879.8	90.0	30.0	1685.8	52.7	17.6	281.0	8.8	2.9	67.4	76.3	81.2	94.0	-4.2	4.5	0
3	0.5	68	2276.9	23.2	23.2	1332.8	13.6	13.6	222.1	2.3	2.3	67.4	76.3	81.2	94.0	-4.2	4.5	0
4	0.5	44	1908.6	37.0	1.9	1117.2	21.7	1.1	186.2	3.6	0.2	67.4	76.3	81.2	97.5	-4.5	4.5	0
5	0.5	68	3355.4	30.5	3.4	1964.2	17.9	2.0	327.4	3.0	0.3	67.4	76.3	81.2	94.0	-4.2	4.5	0
6	0.5	68	2544.7	26.0	26.0	1489.6	15.2	15.2	248.3	2.5	2.5	67.4	76.3	81.2	94.0	-4.2	4.5	0
7	0.5	68	2313.3	23.8	23.8	1354.1	14.0	14.0	225.7	2.3	2.3	67.4	76.3	81.2	94.0	-4.2	4.5	0
8	0.5	44	1186.5	12.2	12.2	694.5	7.2	7.2	115.8	1.2	1.2	67.4	76.3	81.2	97.5	-4.5	4.5	0
9	0.5	68	1671.0	15.2	1.7	978.1	8.9	1.0	163.0	1.5	0.2	71.1	78.8	83.0	94.0	-4.2	4.5	0
10	0.5	68	1151.8	15.3	8.2	674.2	8.9	4.8	112.4	1.5	0.8	71.1	78.8	83.0	94.0	-4.2	4.5	0
11	0.5	68	2002.3	20.4	20.4	1172.1	12.0	12.0	195.3	2.0	2.0	71.1	78.8	83.0	94.0	-4.2	4.5	0
12	0.5	44	1581.0	49.4	16.5	925.4	28.9	9.6	154.2	4.8	1.6	65.1	74.8	80.0	97.5	-4.5	4.5	0
13	0.5	44	1594.1	49.8	16.6	933.1	29.2	9.7	155.5	4.9	1.6	65.1	74.8	80.0	97.5	-4.5	4.5	0
14	0.5	44	1148.0	35.9	12.0	672.0	21.0	7.0	112.0	3.5	1.2	65.1	74.8	80.0	97.5	-4.5	4.5	0
15	0.5	44	1413.0	27.4	1.4	827.1	16.0	0.8	137.9	2.7	0.1	65.1	74.8	80.0	97.5	-4.5	4.5	0
16	0.5	20	435.3	4.4	4.4	254.8	2.6	2.6	42.5	0.4	0.4	59.4	71.1	77.2	99.5	-4.6	4.5	0
17	0.5	20	462.1	4.7	4.7	270.5	2.8	2.8	45.1	0.5	0.5	59.4	71.1	77.2	99.5	-4.6	4.5	0
18	0.5	44	1041.8	9.5	1.1	609.8	5.5	0.6	101.6	0.9	0.1	67.4	76.3	81.2	97.5	-4.5	4.5	0
19	0.5	44	997.8	10.2	10.2	584.1	6.0	6.0	97.3	1.0	1.0	65.1	74.8	80.0	97.5	-4.5	4.5	0
20	0.5	44	1617.3	33.3	16.7	946.7	19.5	9.8	157.8	3.3	1.6	65.1	74.8	80.0	97.5	-4.5	4.5	0
21	0.5	44	1405.2	29.0	14.5	822.6	17.0	8.5	137.1	2.8	1.4	65.1	74.8	80.0	97.5	-4.5	4.5	0
22	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
23	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
24	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
25	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
26	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
27	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
28	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
29	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
30	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
31	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
32	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
33	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
34	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
35	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
36	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
37	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
38	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
39	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
40	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
41	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
42	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
43	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
44	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
45	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
46	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
47	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
48	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
49	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
50	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
51	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
52	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
53	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
54	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
55	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
56	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
57	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
58	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
59	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
60	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
61	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
62	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
63	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
64	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
65	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
66	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
67	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
68	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
69	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
70	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
71	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
72	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
73	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
74	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
75	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
76	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
77	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
78	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
79	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
80	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
81	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
82	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
83	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
84	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
85	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
86	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
87	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
88	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
89	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
90	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
91	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
92	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
93	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
94	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
95	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
96	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
97	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
98	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
99	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
100	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
101	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
102	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
103	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
104	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
105	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
106	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
107	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
108	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
109	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
110	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
111	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
112	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
113	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
114	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
115	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
116	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
117	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
118	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
119	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
120	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
121	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
122	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
123	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
124	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
125	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
126	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
127	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
128	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
129	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
130	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
131	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
132	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
133	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
134	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
135	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
136	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
137	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
138	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0
139	0	#N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#NUM!	#NUM!	#NUM!	#N/A	#N/A	#DIV/0!	0

	Flow: Daytime			Flow: Evening			Flow: Night			Totals: Daytime			Totals: Evening			Totals: Night			Time of Day Averages		
ID	Autos	Med Truck	Heavy Truck	Autos	Med Truck	Heavy Truck	Autos	Med Truck	Heavy Truck	Autos	Med Truck	Heavy Truck	Autos	Med Truck	Heavy Truck	Autos	Med Truck	Heavy Truck	Day Leq	Evening Leq	Night Leq
1	-0.2	-15.5	-33.1	-2.6	-17.8	-35.4	-10.3	-25.6	-43.2	67.4	61.1	48.3	65.1	58.8	46.0	57.3	51.0	38.2	68.4	66.1	58.3
2	3.3	-11.8	-16.6	0.9	-14.1	-18.9	-6.8	-21.9	-26.7	70.9	64.8	64.9	68.6	62.5	62.6	60.8	54.7	54.8	72.7	70.3	62.6
3	2.2	-17.7	-17.7	-0.1	-20.0	-20.0	-7.9	-27.8	-27.8	69.9	58.9	63.8	67.6	56.6	61.5	59.8	48.8	53.7	71.1	68.8	61.0
4	1.5	-15.6	-28.4	-0.8	-18.0	-30.8	-8.6	-25.8	-38.5	68.9	60.7	52.8	66.6	58.4	50.5	58.8	50.6	42.7	69.6	67.3	59.5
5	3.9	-16.5	-26.0	1.6	-18.8	-28.4	-6.2	-26.6	-36.1	71.6	60.1	55.4	69.3	57.8	53.1	61.5	50.0	45.3	72.0	69.7	61.9
6	2.7	-17.2	-17.2	0.4	-19.5	-19.5	-7.4	-27.3	-27.3	70.4	59.4	64.3	68.1	57.1	61.9	60.3	49.3	54.2	71.6	69.3	61.5
7	2.3	-17.6	-17.6	0.0	-19.9	-19.9	-7.8	-27.7	-27.7	70.0	59.1	63.9	67.6	56.7	61.6	59.9	48.9	53.8	71.2	68.9	61.1
8	-0.6	-20.5	-20.5	-2.9	-22.8	-22.8	-10.7	-30.6	-30.6	66.8	55.9	60.8	64.5	53.6	58.4	56.7	45.8	50.7	68.1	65.7	58.0
9	-0.1	-20.5	-30.0	-2.4	-22.8	-32.3	-10.2	-30.6	-40.1	71.3	58.6	53.3	69.0	56.3	51.0	61.2	48.5	43.2	71.6	69.3	61.5
10	-1.7	-20.5	-23.1	-4.0	-22.8	-25.5	-11.8	-30.6	-33.3	69.7	58.6	60.2	67.4	56.3	57.8	59.6	48.5	50.1	70.5	68.2	60.4
11	0.7	-19.2	-19.2	-1.6	-21.5	-21.5	-9.4	-29.3	-29.3	72.1	59.9	64.1	69.8	57.6	61.8	62.0	49.8	54.0	73.0	70.7	62.9
12	1.2	-13.8	-18.6	-1.1	-16.1	-20.9	-8.9	-23.9	-28.7	66.4	61.1	61.5	64.1	58.8	59.2	56.3	51.0	51.4	68.5	66.2	58.4
13	1.3	-13.8	-18.5	-1.0	-16.1	-20.9	-8.8	-23.9	-28.7	66.4	61.1	61.6	64.1	58.8	59.2	56.3	51.0	51.5	68.5	66.2	58.4
14	-0.1	-15.2	-20.0	-2.5	-17.5	-22.3	-10.3	-25.3	-30.1	65.0	59.7	60.1	62.7	57.4	57.8	54.9	49.6	50.0	67.1	64.8	57.0
15	0.8	-16.4	-29.2	-1.6	-18.7	-31.5	-9.4	-26.5	-39.3	65.9	58.5	50.9	63.6	56.2	48.6	55.8	48.4	40.8	66.8	64.4	56.7
16	-2.9	-22.8	-22.8	-5.2	-25.1	-25.1	-13.0	-32.9	-32.9	56.5	48.2	54.4	54.1	45.9	52.0	46.4	38.1	44.3	58.9	56.6	48.8
17	-2.6	-22.6	-22.6	-5.0	-24.9	-24.9	-12.7	-32.7	-32.7	56.7	48.5	54.6	54.4	46.1	52.3	46.6	38.4	44.5	59.2	56.9	49.1
18	-1.1	-21.6	-31.1	-3.5	-23.9	-33.4	-11.3	-31.7	-41.2	66.3	54.8	50.1	63.9	52.5	47.8	56.2	44.7	40.0	66.7	64.3	56.6
19	-0.8	-20.7	-20.7	-3.1	-23.0	-23.0	-10.9	-30.8	-30.8	64.4	54.2	59.4	62.1	51.9	57.1	54.3	44.1	49.3	65.9	63.6	55.8
20	1.3	-15.5	-18.5	-1.0	-17.8	-20.9	-8.8	-25.6	-28.6	66.5	59.4	61.6	64.2	57.0	59.3	56.4	49.3	51.5	68.3	66.0	58.2
21	0.7	-16.1	-19.1	-1.6	-18.5	-21.5	-9.4	-26.2	-29.2	65.9	58.8	61.0	63.6	56.4	58.6	55.8	48.7	50.9	67.7	65.4	57.6
22	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
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Revised Draft

San Ramon 2040 General Plan

Transportation Impact Assessment

Prepared for:
City of San Ramon

June 2023

WC21-3817

FEHR PEERS

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1. Introduction

This report describes the existing setting with regard to transportation and circulation conditions, including transit services and pedestrian and bicycle facilities in the City of San Ramon; discusses the regulations and policies pertinent to transportation and circulation; assesses the potential transportation impacts that could result from implementation of the 2040 General Plan; and provides, where appropriate, mitigation measures to address those impacts.

1.1 Transportation Existing Setting

The existing transportation-related context is described below, beginning with a description of the street network that serves San Ramon. This section also describes existing transit, bicycle network, and pedestrian facilities; current conditions for roadways; planned transportation changes; and applicable planning policies.

1.1.1 Roadway Network

The roadway network serving San Ramon area is shown in **Figure 1**. Key roadways are described below.

1.1.1.1 Arterials, Collectors, and Local Roadways

Arterials are major streets carrying the traffic of local and collector streets to and from freeways and other major streets, with controlled intersections and generally providing direct access to properties. Collectors are streets for traffic moving between arterial and local streets, generally providing direct access to properties. Local streets provide direct access to properties and are often designed to discourage through traffic. Public roadways in San Ramon not included below are designated as local roads. Key arterials and collectors in the City's sphere of influence are described below.

1.1.1.1.1 Arterials

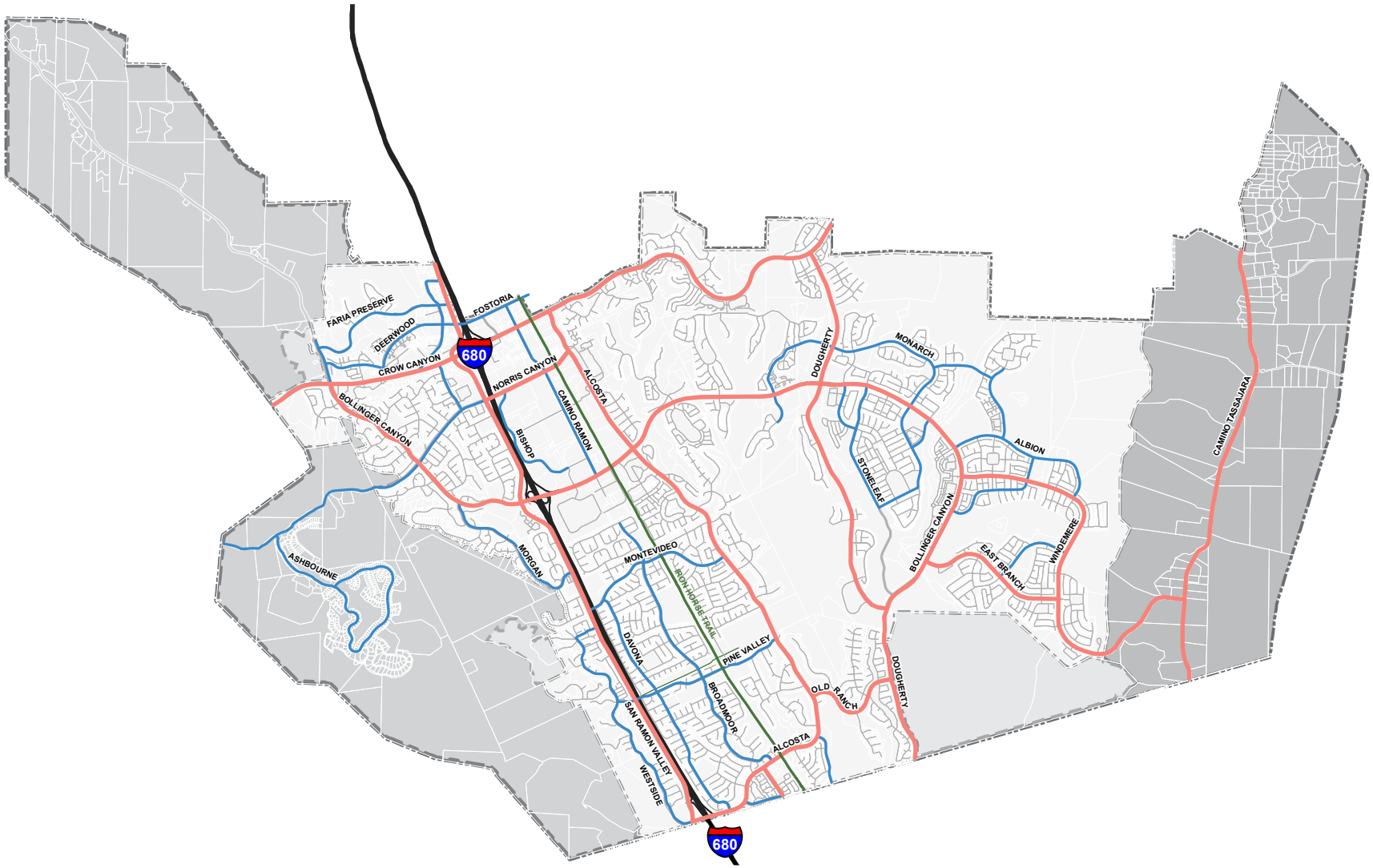
- **Alcosta Boulevard** is a four-lane arterial that connects Crow Canyon Road in the northern part of the City to I-680 at the southern end of the City. The roadway provides access to San Ramon Regional Medical Center, City Center, Central Park, and the San Ramon Golf Club, as well as connecting to other major arterials like Crow Canyon Road, Bollinger Canyon Road, and San Ramon Valley Boulevard. Full access to I-680 is provided at the Alcosta Boulevard interchange.
- **Bollinger Canyon Road** is a four-lane arterial connecting Crow Canyon Road in western San Ramon to the eastern area of the City. The roadway connects the western and eastern residential areas with the City Center, Central Park, and Bishop Ranch. The arterial roadway varies between two and eight lanes. From Norris Canyon Road to Interstate 680, the roadway provides four lanes; between I-680 and Alcosta Boulevard, the roadway provides eight lanes; between Alcosta Boulevard and Dougherty Road, the roadway provides six lanes; and east of Dougherty Road the roadway provides four lanes. Northwest of Norris Canyon Road, Bollinger Canyon Road has 2 lanes, and is designated a collector north of Crow Canyon Road.

- **Camino Tassajara** is a two-lane arterial that is located east of city limits in the City's sphere of influence. It connects Diablo Road to the north in Danville to Tassajara Road/Fallon Road in the south in Dublin.
- **Crow Canyon Road** is an arterial that varies from six to eight lanes from Bollinger Canyon Road to Alcosta Boulevard. West of Bollinger Canyon Road, Crow Canyon Road has two lanes. East of Alcosta Boulevard, Crow Canyon Road has four lanes; construction is underway to widen Crow Canyon Road to six lanes between Alcosta Boulevard and St. George Way. Crow Canyon Road connects the eastern and western residential areas of the city to downtown retail and dining uses, and provides full access to I-680.
- **Dougherty Road** is a six-lane arterial that extends from Crow Canyon Road to the southern city limits, continuing through the City of Dublin and terminating at I-580. . Dougherty Road serves the eastern residential area of the City, and provides access to Rancho San Ramon Community Park.
- **East Branch Parkway** is a four-lane arterial between Bollinger Canyon Road and Windemere Parkway that provides access to Windemere Ranch Middle School and San Ramon Sports Park.
- **Norris Canyon Road** is a four-lane arterial that connects San Ramon Valley Boulevard to Alcosta Boulevard. West of San Ramon Valley Boulevard, Norris Canyon Road is a two-lane collector that provides access to Norris Canyon Estates.
- **Old Ranch Road** is a four-lane arterial that connects Alcosta Boulevard to Dougherty Road. Old Ranch Road provides access to Old Ranch Park.
- **San Ramon Valley Boulevard** is a four-lane arterial that runs parallel to Interstate 680 from the north city limit to the south city Limit.
- **Village Parkway** is a four-lane arterial that connects Alcosta Boulevard to Dublin Boulevard in the City of Dublin. The roadway provides access to Dublin High School.
- **Windemere Parkway** is a four-lane arterial that connects Bollinger Canyon Road to Camino Tassajara. Windemere Parkway provides access to Hidden Hills Elementary School and Six Pillars Park.

1.1.1.1.2 Collectors

The roadway network includes the following collector roadways. Roadways outside city limits but within the City's sphere of influence are noted with an asterisk.

- Albion Road
- Ashbourne Drive/Circle*
- Bishop Drive
- Bollinger Canyon Road north of Crow Canyon Road
- Broadmoor Drive
- Camino Ramon
- Davona Drive
- Deerwood Drive
- Deerwood Road/Fostoria Way
- Faria Preserve Parkway
- Harcourt Way
- Hooper Drive
- Ivy Hill Way
- Ivy Leaf Springs Road
- Japonica Way
- Kimball Avenue
- N Gale Ridge Road/S Gale Ridge Road
- N Monarch Road/S Monarch Road
- Main Branch Road
- Montevideo Drive
- Morgan Drive
- Norris Canyon Road west of San Ramon Valley Boulevard
- Omega Road
- Pine Valley Road
- S Wedgewood Road
- Sherwood Way
- Stagecoach Road
- Stoneleaf Road
- Twin Creeks Drive
- Westside Drive



City Limit
Sphere of Influence
Planning Area
Urban Growth Boundary

Freeway
Arterial
Collector
Iron Horse Trail
Residential Street

Source: San Ramon General Plan 2035

0 0.5 1 2 Miles

Figure 1

Roadway Network

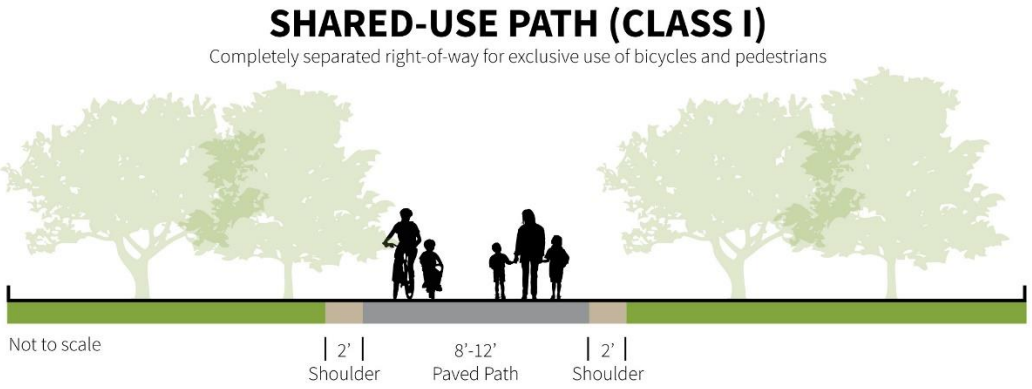
EIR_WC21-3817_1_RoadClass

1.1.2 Bicycle and Pedestrian Facilities

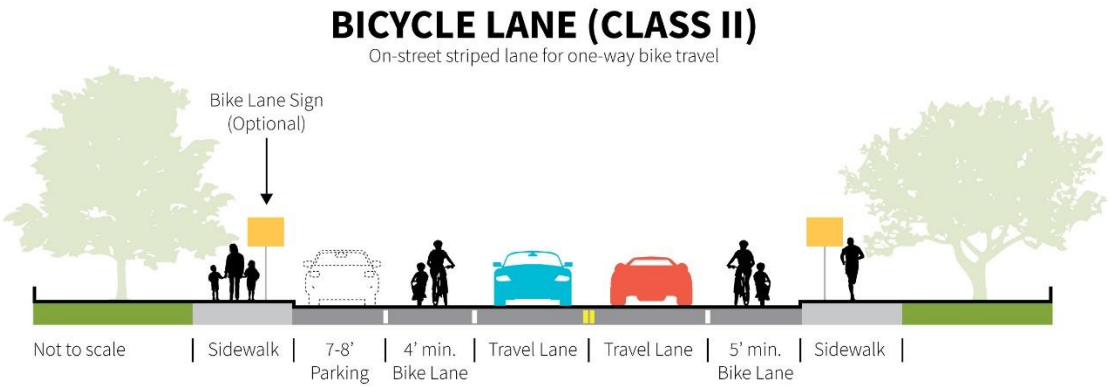
1.1.2.1 Bicycle Facilities

Bicycle planning and design typically relies on guidelines and design standards, including four distinct types of bikeway facilities, established by the California Department of Transportation (Caltrans) in the *Highway Design Manual* (Chapter 1000: Bikeway Planning and Design). The *San Ramon Bicycle Master Plan (April 2018)* provides definitions for bikeway classes, as described below.

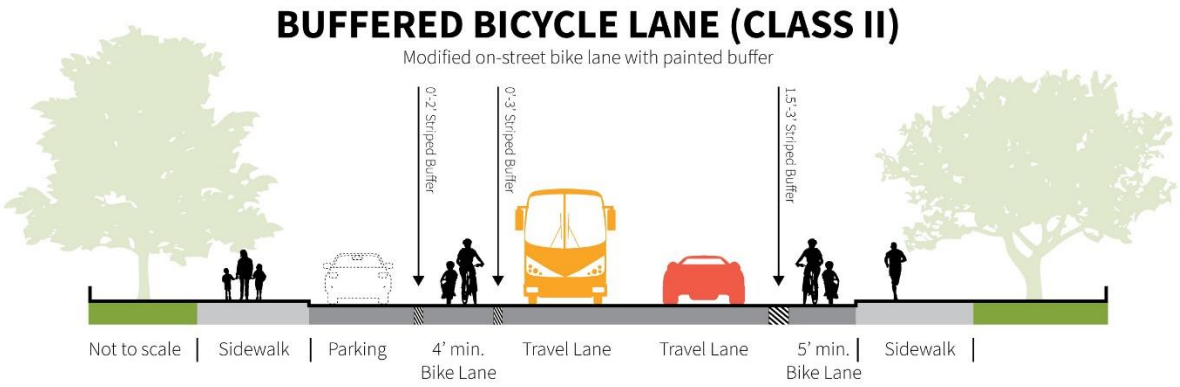
- **Class I Bikeways (Shared-Use Paths)** are two-way paved facilities, physically separated from motor vehicle traffic and used by bicyclists, pedestrians, and other non-motorized users. Multi-use paths are often located in an independent alignment, such as a greenway. Multiuse paths provide low-stress facilities for cyclists.



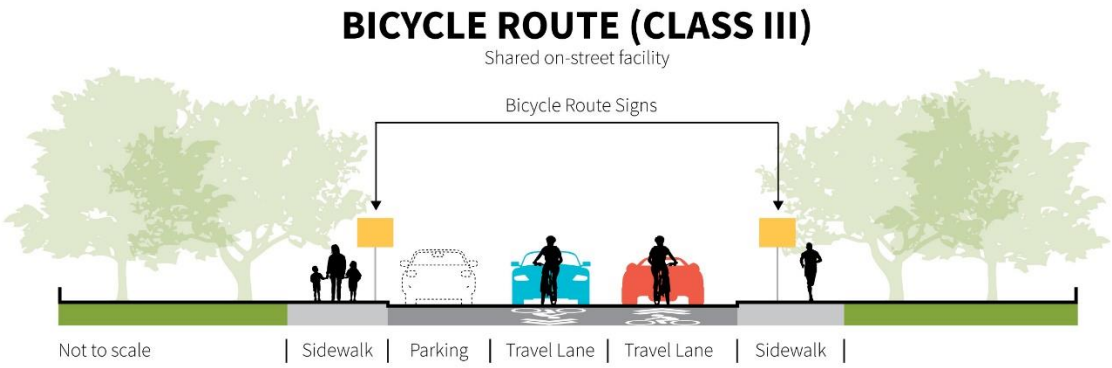
- **Class II Bikeways (Bicycle Lanes)** provide an exclusive space for bicyclists in the roadway and are established by painting lines and symbols on the roadway surface. Bicycle lanes are for one-way travel and are typically provided in both directions on two-way streets and/or on one side of a one-way street.



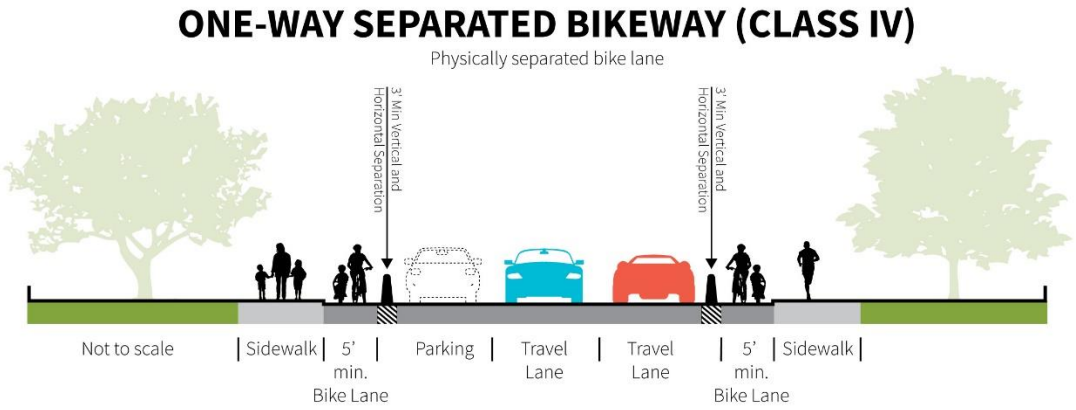
- **Class II Buffered Bikeways** are implemented by painting or otherwise creating a flush buffer zone between a bicycle lane and the adjacent travel lane. While buffers are typically used between bicycle lanes and motor vehicle travel lanes to increase bicyclists' comfort, they can also be installed between bicycle lanes and parking lanes.

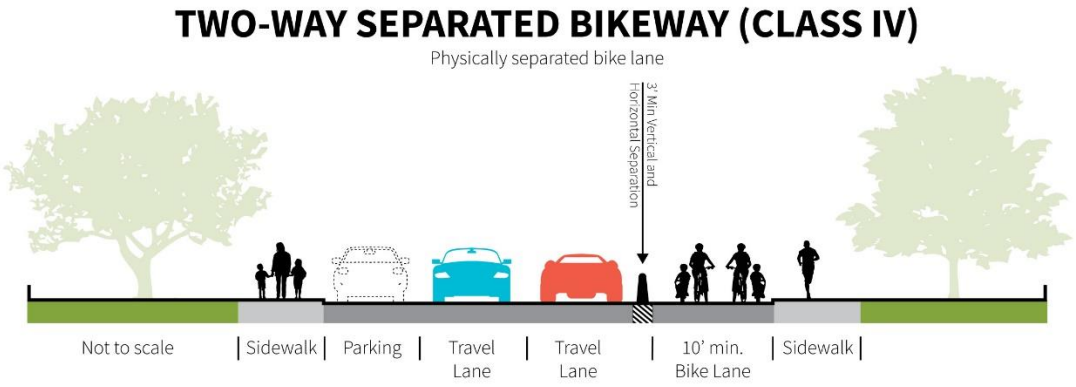


- **Class III Bikeways (Bicycle Routes)** have signage indicating the roadways are shared with bicyclists or motor vehicle traffic. In general, these should be located on roads with low traffic speeds and volumes as a part of a signed route or bicycle boulevard. Class III Bicycle Boulevards are applied on quiet streets, often in residential neighborhoods. These treatments are designed to prioritize bicycle through-travel, while reducing through traffic volumes and maintaining relatively low motor vehicle speeds. Treatments vary depending on context and often include elements of traffic calming.



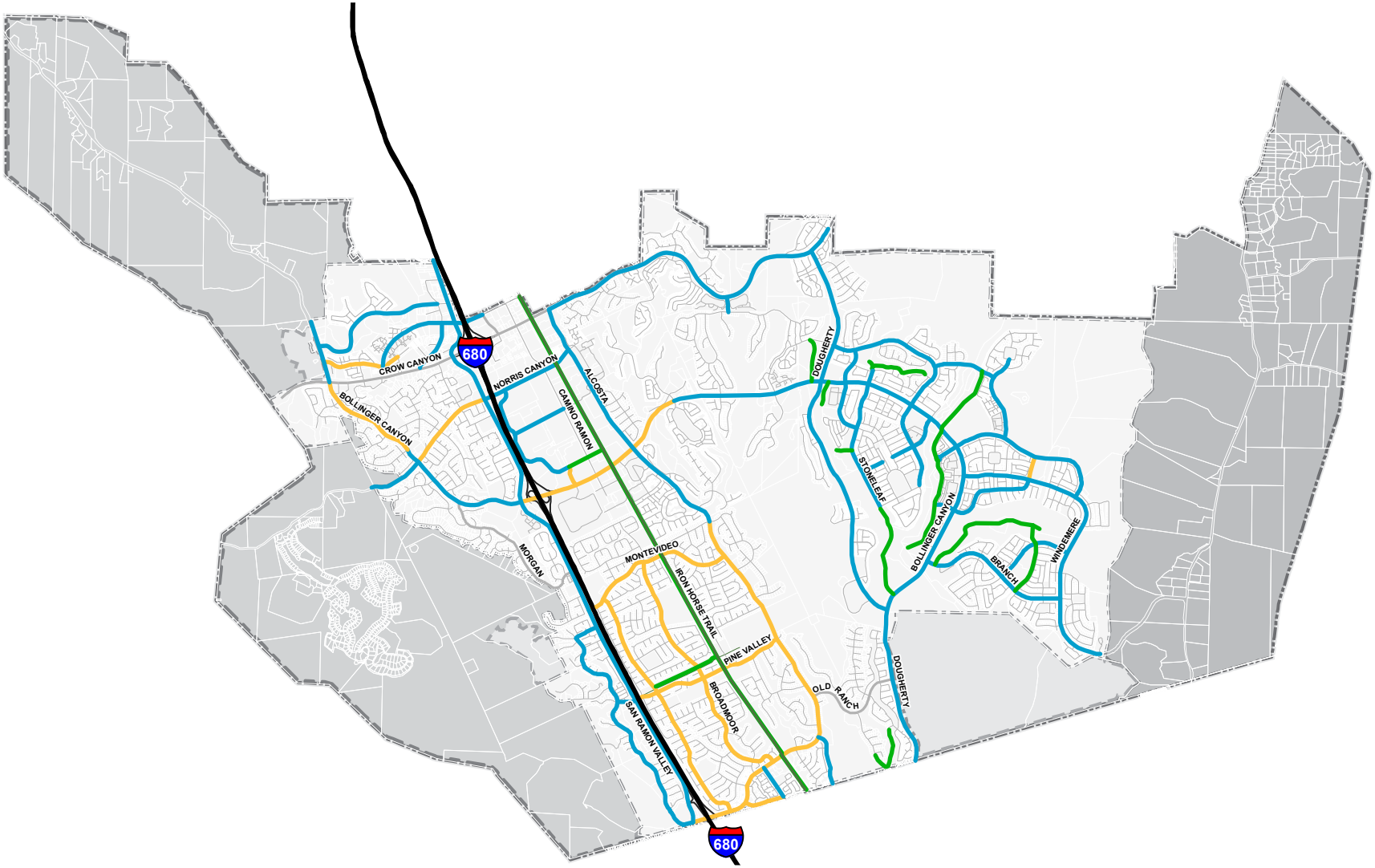
- **Class IV Bikeways (Protected Bicycle Lanes)** are an exclusive bikeway facility type that are physically separated from motor vehicle traffic by barriers. Barriers could include raised islands, planters, flexible posts, or on-street parking. A separated bike lane is separate and distinct from the sidewalk and combines the user experience of a multi-use path with the on-street infrastructure of a conventional bike lane.





Existing bicycle facilities are shown on **Figure 2.A**.

The San Ramon Bicycle Master Plan proposes future upgrades and new facilities to create a safe and connected bike network throughout the city. The proposed plan aims to provide a viable, stress-free biking experience for everyone interested in bicycling. **Figure 2.B** shows the planned future network.



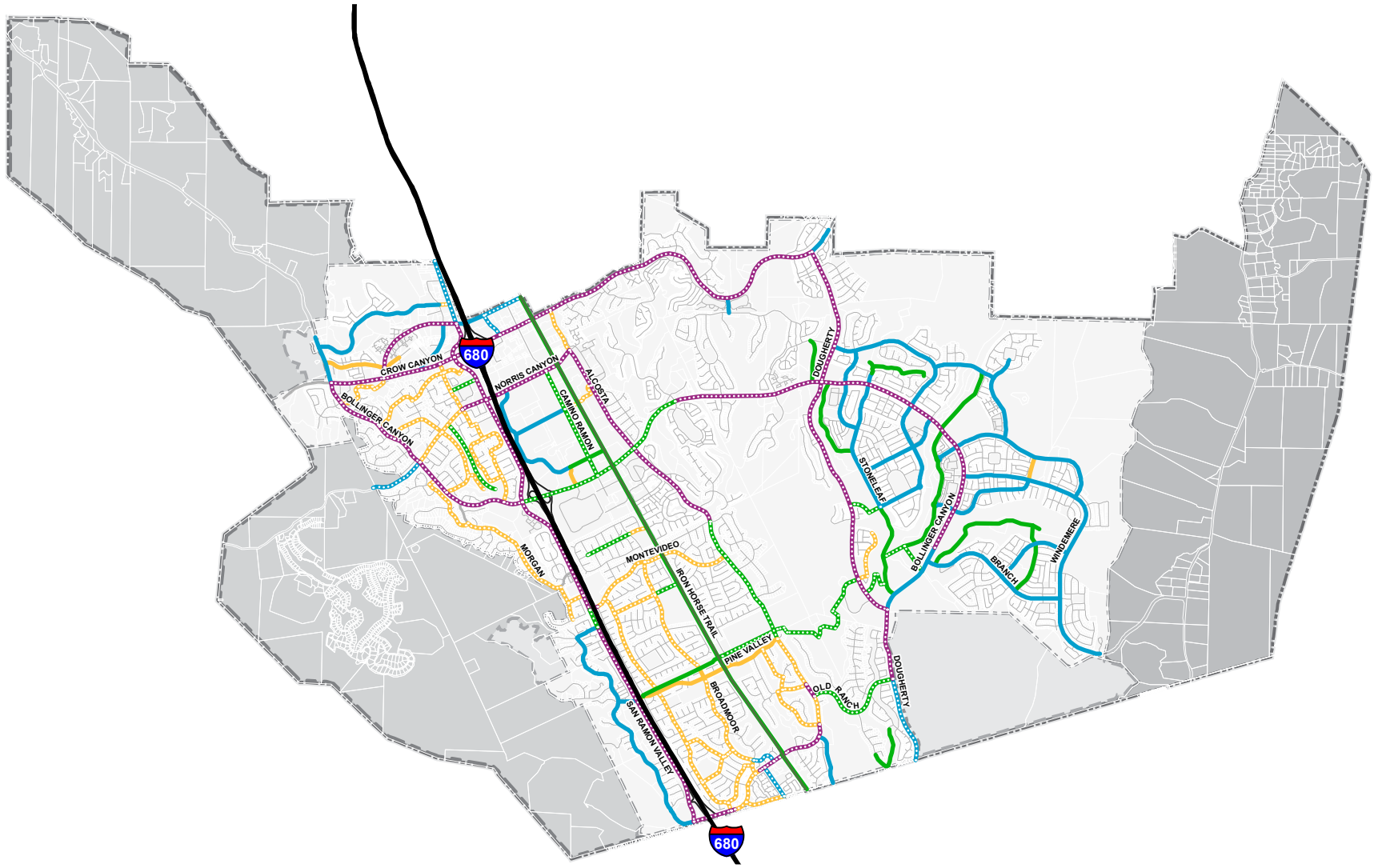
Source: City of San Ramon

0 0.5 1 2 Miles

- City Limit
- Sphere of Influence
- Planning Area
- Urban Growth Boundary
- Highway
- Major Roadways
- Class I Multi-Use Path
- Class II Bike Lane
- Class III Bike Route

Figure 2.A

Existing Bicycle Facilities



City Limit
Sphere of Influence
Planning Area
Urban Growth Boundary
Highway
Major Roadways

Class I Multi-Use Path
Class II Bike Lane
Class III Bike Route
Proposed Class I Multi-Use Path
Proposed Class II Bike Lane
Proposed Class III Bike Route
Proposed Class IV Separated Bike Lane

Source: City of San Ramon Bicycle Master Plan (April 2018)
Updated to reflect facilities built since Bicycle Master Plan publication

0 0.5 1 2 Miles

Figure 2.B

Existing and Proposed Bicycle Facilities

1.1.2.2 Pedestrian Facilities

The *San Ramon Walking District Plan (2022)* proposes a walking district in San Ramon. The plan defines the walking district between Crow Canyon Road, Alcosta Boulevard, Interstate 680, and Chevron Campus south of Bollinger Canyon Road. The district includes Iron Horse Trail, Bishop Ranch lakes, City Hall, Central Park, City Center, Crow Canyon Commons, Transit Center, schools, farmers market, and San Ramon Library.

A majority of streets in San Ramon's Walking District have a standard five to six foot sidewalk running adjacent to the street. Some sidewalks along Bollinger Canyon Road lack the opportunity for shade and offer little buffer between pedestrians and vehicular traffic, which may deter people from walking. There are some wider walkways that exist within Central Park, around the City Center, and around Lake Cecilia and Lake Annabel. The Iron Horse Trail is a regional paved shared-use path that accommodates walkers, runners, and bicyclists traveling through the Walking District and connects to east-west walkways in the city core.

The *San Ramon Walking District Plan* proposes improving the Walking District's pedestrian facilities by creating walking paths and walking corridors, widening sidewalks, and adding landscape buffers between vehicular traffic on major streets including Bishop Drive, Camino Ramon, Executive Parkway, and Norris Canyon Road. Other proposed amenities to encourage walking include walking loops that link major destinations, new parks and parkways, Iron Horse Trail Overcrossings, added seating, drinking fountains, public art, and wayfinding signage.

1.1.3 Public Transportation

Transit agencies serving San Ramon and the surrounding region include Bay Area Rapid Transit (BART), which has stations in Walnut Creek and Dublin, and Contra Costa Transit Agency (County Connection), which provides bus service in the area. The San Ramon Transit Center on Camino Ramon and Executive Parkway provides a bus stop for multiple bus routes and parking for intermodal travelers to increase the accessibility of transit. County Connection provides local routes, express routes, and weekend routes, as described below.

1.1.3.1 Local Routes

- **Route 21 – BART Walnut Creek/San Ramon** Route 21 operates between Walnut Creek BART station and San Ramon Transit Center via Danville Boulevard, Camino Ramon, and San Ramon Valley Boulevard. Weekday service runs between 5:30 AM and 9:30 PM, with typical headways of 30 minutes during peak periods (5:30-10:30 AM and 1:30-8:30 PM) and 60 minutes in off-peak periods.
- **Route 35 – Dublin BART/San Ramon** Route 35 operates between Dublin/Pleasanton BART station and San Ramon Transit Center via Dougherty Road, Bollinger Canyon Road, Windemere Parkway, Crow Canyon Road, and Bishop Drive. Weekday service runs between 6:00 AM and 8:00 PM, with typical headways of 30 minutes during peak periods (6:00-11:00 AM and 2:00-8:00 PM) and 60 minutes in off-peak periods.

1.1.3.2 Express Routes

- **Route 92X – Pleasanton ACE/Mitchell Drive** Route 92X operates between Pleasanton Ace Train Station and Mitchell Drive Park and Ride Lot in Walnut Creek via Bernal Avenue, Interstate 680, Camino Ramon, and Ygnacio Valley Road. Weekday service runs once from 5:30-7:30 AM and three times from 3:30-7:45 PM.
- **Route 95X – San Ramon/BART Walnut Creek** Route 95X operates between San Ramon Transit Center and Walnut Creek BART station via Executive Parkway, Norris Canyon Road, and Interstate 680. Weekday service runs from 6:30-8:45 AM and 3:15-7:15 PM every 30 minutes.
- **Route 96X – BART Walnut Creek/Bishop Ranch** Route 96 X operates between Walnut Creek BART station and Bishop Ranch in San Ramon via Interstate 680 and Camino Ramon. Weekday service runs from 6:15-9:30 AM and 3:00-7:15 PM every 30 minutes.
- **Route 97X – BART Dublin/Bishop Ranch** Route 97X operates between Dublin/Pleasanton BART station and Bishop Ranch in San Ramon via Interstate 580, Interstate 680, and Camino Ramon. Weekday service runs from 6:30-9:00 AM and 4:00-6:15 PM every 60 minutes.

1.1.3.3 Weekend Routes

- **Route 321 – BART Walnut Creek/San Ramon** Route 321 operates between Walnut Creek BART station and San Ramon Transit Center via Danville Boulevard, Camino Ramon, and San Ramon Valley Boulevard. Weekend service runs between 7:15 AM and 9:30 PM every 60 minutes.
- **Route 335 – BART Dublin/San Ramon** Route 335 operates between Dublin/Pleasanton BART station and San Ramon Transit Center via Dougherty Road, Bollinger Canyon Road, and Bishop Drive. Weekend service runs between 7:30 AM and 7:00 PM every 60 minutes.

Figure 3 depicts County Connection bus routes in San Ramon.

County Connection also offers a rideshare support program named Go San Ramon. Starting in May 2022, County Connection pays half the fare (up to $5) on rideshare trips on Uber and Lyft within a certain service area. This program was introduced in response to the elimination of bus route 36 which previously served the service area.

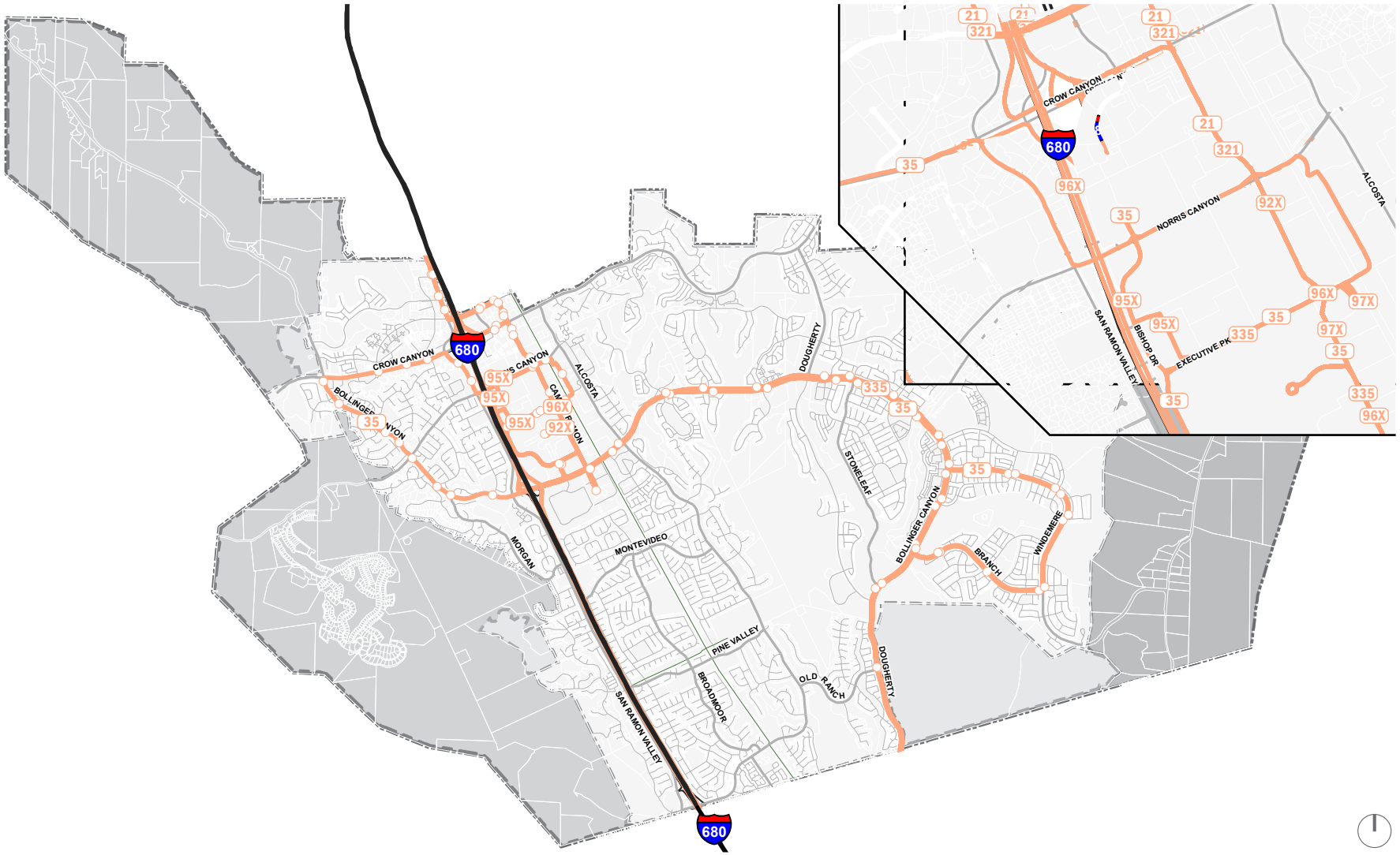


Figure 3

Transit Routes

1.2 Transportation Regulatory Setting

1.2.1 Federal

No federal plans, policies, regulations, or laws related to transportation and circulation are applicable to the project.

1.2.2 State

1.2.2.1 Assembly Bill 1358

Assembly Bill 1358, also known as the California Complete Streets Act of 2008, requires cities and counties to include "Complete Streets" 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 people with disabilities. These policies can apply to new streets as well as the redesign of corridors.

The City of San Ramon has established Complete Streets Guidelines that inform the implementation of policies.

1.2.2.2 Senate Bill 743

Passed in 2013, California Senate Bill (SB) 743 changes the focus of transportation impact analysis in CEQA from measuring impacts to drivers, to measuring the impact of driving. The change is being made by replacing Level of Service (LOS) with Vehicle Miles Traveled (VMT). This shift in transportation impact focus is intended to better align transportation impact analysis and mitigation outcomes with the state's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through development of multimodal transportation networks. Level of service or other delay metrics may still be used to evaluate the impact of projects on drivers as part of land use entitlement review and impact fee programs.

In December 2018, the Natural Resources Agency finalized updates to Section 15064.3 of the CEQA Guidelines, including the incorporation of SB 743 modifications. The Guidelines' changes were approved by the Office of Administrative Law and as of July 1, 2020 are now in effect statewide.

To help aid lead agencies with SB 743 implementation, the Governor's Office of Planning and Research (OPR) produced the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) that provides guidance about the variety of implementation questions they face with respect to shifting to a VMT metric. Key guidance from this document includes:

- VMT is the most appropriate metric to evaluate a project's transportation impact.
- OPR recommends tour- and trip-based travel models to estimate VMT, but ultimately defers to local agencies to determine the appropriate tools.
- OPR recommends measuring VMT for residential and office projects on a "per rate" basis.

- OPR recommends that a per capita or per employee VMT that is 15% below that of existing development may be a reasonable threshold. In other words, an office project that generates VMT per employee that is more than 85% of the regional VMT per employee could result in a significant impact. OPR notes that this threshold is supported by evidence that connects this level of reduction to the state's emissions goals.
- OPR recommends that where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than-significant transportation impact. If the project leads to a net overall increase in VMT, then the thresholds described above should apply.
- Lead agencies have the discretion to set or apply their own significance thresholds.

1.2.2.3 Senate Bill 375

Senate Bill (SB) 375 provides guidance regarding curbing emissions from cars and light trucks. There are four major components to SB 375. First, SB 375 requires regional greenhouse gas emission targets. These targets must be updated every eight years in conjunction with the revision schedule of the housing and transportation elements of local general plans. Second, Metropolitan Planning Organizations are required to create a Sustainable Communities Strategy (SCS) that provides a plan for meeting regional targets. Third, SB 375 requires housing elements and transportation plans to be synchronized on eight-year schedules. Finally, Metropolitan Planning Organizations must use transportation and air emissions modeling techniques that are consistent with the guidelines prepared by the California Transportation Commission.

1.2.2.4 Caltrans Construction and Safety Requirements

Caltrans issued the VMT-Focused Transportation Impact Study Guide (TISG) in May 2020, outlining the process by which Caltrans will review and assess VMT impacts of land development projects. The TISG generally aligns with the guidance in the OPR *Technical Advisory*.

1.2.3 Regional

1.2.3.1 Plan Bay Area

Plan Bay Area 2050 is a long-range integrated transportation and land-use/housing strategy through the year 2050 for the San Francisco Bay Area. On October 21, 2021, the Association of Bay Area Governments (ABAG) Executive Board and the Metropolitan Transportation Commission (MTC) jointly approved the plan. Plan Bay Area 2050 connects the elements of housing, the economy, transportation, and the environment through 35 strategies that will make the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges. In the short-term, the plan's Implementation Plan identifies more than 80 specific actions for MTC, ABAG, and partner organizations to take over the next five years to make headway on each of the 35 strategies. Plan Bay Area is the nine-county region's long-range plan designed to meet the requirements of Senate Bill 375, described above. However, during the time of this analysis, the CCTA Model reflects data included in Plan Bay Area 2040, and this model is currently the best available tool for VMT analysis.

1.2.3.2 Contra Costa County Congestion Management Program

The Contra Costa Transportation Authority (CCTA) is Contra Costa County's designated Congestion Management Agency (CMA). It is responsible for implementing programs to ensure traffic levels remain manageable. San Ramon serves on the Southwest Area Transportation Committee (SWAT) that includes Contra Costa County, the Town of Danville, and the cities of Orinda, Lafayette, and San Ramon.

As the CMA, CCTA coordinates land use, air quality, and transportation planning among local jurisdictions. A Congestion Management Program (CMP) was created to spend the funds allocated to these projects, known as Measure J. This measure is a one-half cent countywide sales tax used for transportation improvements within the County. The revenue must be spent on projects and programs included in the CCTA Transportation Expenditure Plan (Expenditure Plan) which designates 18% of the annual sales tax revenue as "return-to-source" funds. The City's eligibility for these funds is contingent on compliance with the City's Growth Management Program (GMP), reflected in the Growth Management section of the General Plan.

1.2.3.3 Contra Costa Countywide Transportation Plan

As a member of CCTA, the City of San Ramon is active in the development of the Countywide Transportation Plan (CTP), intended to carry out the following countywide transportation goals:

- Enhance the movement of people and goods on highways and arterial roads
- Manage the impacts of growth to sustain Contra Costa's economy and preserve its environment
- Provide and expand safe, convenient, and affordable alternatives to the single-occupant vehicle
- Maintain the transportation system

The CTP incorporates five sub-regional Action Plans for Routes of Regional Significance (Action Plans). This is one of the primary vehicles for implementing achieving the Measure J Growth Management Program's goal of reducing the cumulative impacts of growth. The Action Plans also fulfill a key requirement of CCTA's Congestion Management Program. This is a state-mandated program for evaluating the impact of land use decisions on the regional transportation system and establishing performance measures. Each Action Plan contains these components:

- Long range assumptions about future land uses based on local general plans and travel demand based on household and job growth.
- Multimodal transportation objectives that can be measured and timed.
- Specific actions to be implemented by each jurisdiction.
- A process for consultation on environmental documents.
- A procedure for reviewing the impacts of local General Plan amendments that could affect the transportation objectives.
- A schedule for reviewing and updating the Action Plans.

The City of San Ramon is included in the Tri-Valley Action Plan. The Action Plan includes both regional actions and actions for specific routes. As defined by the plan, Routes of Regional Significance are freeways and major arterials that connect two or more subareas, cross county boundaries, carry a significant amount of through traffic, or provide access to a regional highway or transit facility. They are broken up into two categories: Interregional and Intraregional. Interregional routes provide linkages between the Tri-Valley and other sub-areas. Intraregional routes connect communities within the Tri-Valley.

The routes or regional significance are listed below. Note that routes both within and outside of San Ramon are listed, as the network has a regional service area.

1.2.3.3.1 Interregional Routes of Regional Significance

- I-580
- I-680
- State Route 84
- Vasco Road
- Crow Canyon Road

1.2.3.3.2 Intraregional Routes of Regional Significance

- Alcosta Boulevard
- Bernal Avenue
- Bollinger Canyon Road
- Camino Tassajara
- Danville Boulevard
- Dougherty Road
- Dublin Boulevard
- Fallon Road
- First Street/Railroad Avenue
- Hopyard Road
- Iron Horse Trail
- Jack London Boulevard
- San Ramon Road
- San Ramon Valley Boulevard
- Santa Rita Road
- Stanley Boulevard
- Stoneridge Drive
- Sunol Boulevard
- Sycamore Valley Road

- Tassajara Road
- Vasco Road

CCTA and its consultants began updating the subregional Action Plans and the Countywide Transportation Plan in 2021. These updates will bring the plans into compliance with recent State transportation legislation such as SB 743 and will outline countywide efforts to increase public and active transportation mode share. In accordance with emerging transportation best management practices, these plans will expand beyond typical transportation evaluation topics and will consider safety, equity, climate change, and technology throughout. These plans will include Regional Transportation Objectives (RTOs) that set quantifiable metrics by which CCTA and its jurisdictions can measure the success of actions. Specific actions, including both projects and programs, will be adopted to support the achievement of each RTO, and will be intended to result in a reduction of countywide VMT and GHG emissions.

1.2.3.4 CCTA VMT Guidance for Member Agencies

The CCTA has developed guidance for member jurisdictions to use in developing their own VMT analysis methods, metrics, and thresholds of significance. The CCTA's *Growth Management Program Implementation Guide* (Revised February 17, 2021), Appendix F (CCTA Recommended Methodology) describes the recommendations. A flow chart describing the recommended methodology is included in the Technical Appendix. At the time of publishing, the City of San Ramon has chosen to follow the CCTA guidance. More detail on the VMT analysis methodology, metrics, and thresholds of significance are provided in Section 4.14.3, Methodology and Assumptions.

1.2.4 Local

1.2.4.1 San Ramon General Plan

The *City of San Ramon General Plan 2035*, adopted on April 28, 2015, is a comprehensive long-range general plan for the physical development of the City of San Ramon. The various elements within the General Plan include policies for the physical development of the City. The City is in the process of updating the General Plan, which is the subject of this EIR. The Draft 2040 General Plan includes the guiding policies listed below; each guiding policy is supplemented by implementing policies.

- Guiding Policy 5.1-G-1: Maintain acceptable LOS and ensure that future land uses and the circulation system are in balance.
- Guiding Policy 5.2-G-1: Actively participate in local and regional transportation planning.
- Guiding Policy 5.3-G-1: Encourage transportation facilities that consider the users' safety and allow for all modes of travel based on local conditions and needs of the community.
- Guiding Policy 5.4-G-1: Design arterial roadways to efficiently move inter-city traffic, thereby minimizing through-traffic in residential areas of the City.

- Guiding Policy 5.5-G-1: Design collector and local roadways to improve circulation and to connect residential and commercial areas of the city while incorporating Complete Streets concepts pursuant to Policy 5.3-I-2 where appropriate.
- Guiding Policy 5.6-G-1: Utilize Transportation Demand Management (TDM) strategies as an integral component of the City's transportation program to reduce total vehicle trips and VMT on San Ramon roadways and reduce the corresponding vehicle emissions that promote regional air quality improvements.
- Guiding Policy 5.6-G-2: Encourage trip reduction measures in an effort to reduce VMT, improve air quality, and reduce greenhouse gas emissions.
- Guiding Policy 5.7-G-1: Encourage bicycling and walking as alternatives to driving, consistent with Complete Streets concepts.

1.3 Transportation Impacts and Mitigation Measures

This section describes the analysis techniques, assumptions, and results used to identify potential impacts of the 2040 General Plan on the transportation system. Transportation impacts are described and assessed, and mitigation measures are recommended for impacts identified as significant or potentially significant.

1.3.1 Transportation Impact Assessment under CEQA

State law has changed with respect to how transportation-related impacts may be addressed under CEQA. Traditionally, lead agencies used LOS to assess the significance of such impacts, with greater levels of congestion considered to be more significant than lesser levels. Mitigation measures typically took the form of capacity-increasing improvements, which often had their own environmental impacts (e.g., to biological and cultural resources). Depending on circumstances, and an agency's tolerance for congestion (e.g., as reflected in its general plan), LOS D, E, or F often represented significant environmental effects. In 2013, however, the Legislature passed legislation with the intention of ultimately doing away with LOS in most instances as a basis for environmental analysis under CEQA. Enacted as part of Senate Bill 743 (2013), PRC section 21099, subdivision (b)(1), directed the Governor's Office of Policy and Research (OPR) to prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed CEQA Guidelines addressing "criteria for determining the significance of transportation impacts of projects within transit priority areas. Those criteria shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. In developing the criteria, [OPR] shall recommend potential metrics to measure transportation impacts that may include, but are not limited to, vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated. The office may also establish criteria for models used to analyze transportation impacts to ensure the models are accurate, reliable, and consistent with the intent of this section."

CEQA Guidelines section 21099(b)(2) further provides that "[u]pon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely

by level of service or similar measures of vehicular capacity or traffic congestion, *shall not be considered a significant impact on the environment* pursuant to [CEQA], except in locations specifically identified in the guidelines, if any." (Italics added.)

Pursuant to SB 743, the Natural Resources Agency promulgated CEQA Guidelines section 15064.3 in late 2018. It became effective in early 2019. Subdivision (a) of that section provides that "[g]enerally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) [regarding roadway capacity], a project's effect on automobile delay shall not constitute a significant environmental impact."

1.3.2 Significance Thresholds

The significance criteria used to evaluate the 2040 General Plan impacts related to transportation under CEQA are based on Appendix G of the State CEQA Guidelines, as well as VMT thresholds of significance recommended by the CCTA.

The following describes the significance criteria used to identify impacts related to transportation for the proposed plan. A significant impact would occur if implementation of the plan would:

1. Conflict with an applicable program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
2. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).
3. Substantially increase hazards due to a geometric design feature (e.g. sharp curves of dangerous intersections) or incompatible uses (e.g. farm equipment); or
4. Result in inadequate emergency vehicle access.

Significance criteria 1 above pertains to consistency with circulation programs, plans, ordinances, and policies. To determine significance under this criteria, the following thresholds are applied:

There would be a significant impact related to the transit system if the 2040 General Plan:

1. Disrupts existing transit services or facilities; or
2. Conflicts with an existing or planned transit facility; or
3. Conflicts with transit policies adopted by the City of San Ramon or the Contra Costa Transportation Authority.

There would be a significant impact related to the roadway if the 2040 General Plan:

1. Disrupts existing roadways;
2. Interferes with planned roadway facilities; or
3. Conflicts with applicable roadway plans, guidelines, policies, or standards.

There would create a significant impact related to the bicycle system if the 2040 General Plan would:

1. Disrupt existing bicycle facilities;
2. Interfere with planned bicycle facilities; or,
3. Conflict with applicable bicycle system plans, guidelines, policies, or standards.

There would be a significant impact related to the pedestrian system if the 2040 General Plan would:

1. Disrupt existing pedestrian facilities; or
2. Interfere with planned pedestrian facilities; or
3. Conflict with applicable pedestrian system plans, guidelines, policies, or standards.

Significance criteria 2 pertains to VMT. To determine significance under this criteria, the following thresholds are applied:

1. Result in Citywide home-based VMT per resident that is higher than 85% of the baseline Citywide average home-based VMT per resident;
2. Result in Citywide home-work VMT per employee that is higher than 85% of the Citywide average home-work VMT per employee; or
3. Result in 2040 Countywide boundary VMT per service population increases with the Planning Area. (Refer to the next section for more information on the source of these thresholds).

Significance criteria 3 pertains to the creation of transportation hazards. To determine significance under Criterion 3, the following specific thresholds of significance are applied.

The impact would be significant if the Plan resulted in transportation facilities that do not conform to applicable City and industry design standards for roadways, bicycle facilities, and pedestrian facilities.

Significance criteria 4 pertains to the adequacy of emergency access. To determine significance under Criterion 4, the following specific thresholds of significance are applied.

This impact would be significant if roadway geometric design features were not designed to City standards and standard engineering practices were not followed, and design resulted in obstacles to emergency responders.

1.3.3 Methodology and Assumptions for VMT Analysis

The VMT analysis methodology utilizes the procedures described in the CCTA's *Growth Management Program Implementation Guide* (Revised February 17, 2021), Appendix F. The procedures are summarized below.

1.3.3.1 Project Screening

There are five screening criteria that can be applied to screen projects out of conducting project-level VMT analysis.

1. **CEQA Exemption.** Any project that is exempt from CEQA is not required to conduct a VMT analysis.

2. **Small Projects.** Small projects are presumed to cause a less than significant VMT impact. Small projects are defined as having 10,000 square feet or less of non-residential space, 20 residential units or fewer, or otherwise generate less than 836 VMT per day.
3. **Local-Serving Uses.** Projects that consist of local-serving uses can generally be presumed to have a less than significant impact absent substantial evidence to the contrary, since these types of projects will primarily draw users and customers from a relatively small geographic area that will lead to short-distance trips and trips that are linked to other destinations. (Note that the agency and analysts should provide substantial evidence to support the finding that a use is local serving, such as a market study, studies of similar uses elsewhere, survey of other similar uses within the project's market area, etc.)
4. **Projects Located in Transit Priority Areas (TPAs).** Projects located within a TPA can be presumed to have a less-than-significant impact absent substantial evidence to the contrary. This exemption would not apply if the project:
    - Has a Floor Area Ratio (FAR) of less than 0.75;
    - Includes more parking for use by residents, customers, or employees than required by the lead agency (if the agency allows but does not require the project to supply a certain amount of parking);
    - Is inconsistent with the applicable Sustainable Communities Strategy (SCS) (as determined by the lead agency, with input from the Metropolitan Transportation Commission (MTC)); or
    - Results in a net reduction in multi-family housing units.
5. **Projects Located in Low VMT Areas.** Residential and employment-generating projects located within a low VMT-generating area are presumed to have a less than significant impact absent substantial evidence to the contrary.
   A low VMT area is defined as follows:
    - For housing projects: Cities and unincorporated portions within CCTA's five subregions that have existing home-based VMT per capita that is 85% or less of the existing countywide average.
    - For employment-generating projects: Cities and unincorporated portions of CCTA's five subregions that have existing home-work VMT per worker that is 85% or less of the existing regional average.

There is no definition of a low VMT area for regional-serving and other project types, since these projects will always require a VMT analysis. Mixed-use projects may qualify for the use of this screening criterion if they include only housing, employment-generating uses and local-serving uses, and can reasonably be expected to generate VMT per resident and/or per worker that is similar to the existing land uses in the low VMT area.

As will be discussed below under section 1.3.3.2, the Project does not meet these five potential screening approaches and thus requires a full VMT assessment.

1.3.3.2 Projects Requiring VMT Analysis

A project not excluded from VMT analysis through the screening process described above is subject to a VMT analysis to determine if it has a significant VMT impact. The analysis scenarios and significance assessment are described below.

Analysis Scenarios and Significance Test

The following scenarios are addressed in the VMT analysis. Note that, while the CCTA guidance recommends that project-level impacts be evaluated against baseline conditions (i.e. a 2022 With Project scenario), for this analysis the home-based VMT per resident and home-work VMT per employee of the Project are evaluated under future (2040) conditions (i.e. a 2040 With Project scenario), because the Project describes expected development through 2040. In addition to the comparison of the Project's 2040 home-based VMT per resident and home-work VMT per employee to the baseline VMT threshold, a cumulative assessment of the Project's effect on total countywide VMT rates (boundary VMT) is presented.

- *Baseline (2022) Conditions:* The most current version of the baseline (2022) CCTA model is used to determine the baseline home-based VMT per resident and home-work VMT per employee for all the traffic analysis zones (TAZs) in the city of San Ramon, as well as to determine the citywide average VMT per resident and VMT per employee, and the 85 percent values of these metrics. Countywide metrics are also reported for reference.
- *2040 No Project Conditions:* The most current version of the Year 2040 CCTA model is used to determine the home-based VMT per resident and the home-work VMT per employee for all TAZs in the city of San Ramon. Countywide metrics are also reported for reference.
- *2040 Plus Project Conditions:* The 2040 No Project CCTA model land uses within San Ramon are adjusted to reflect the housing units proposed in the 2040 General Plan, and the same metrics as described for the 2040 No Project case are calculated.
- *2040 Plus Project Significance Assessment:* The 2040 Plus Project home-based VMT per resident and home-work VMT per employee for the city of San Ramon is compared to the baseline 2022 citywide home-based VMT per resident and home-work VMT per employee. If the 2040 Plus Project citywide values are higher than 85% of the baseline 2022 citywide average values, the impact is significant.
- *Cumulative Analysis and Significance Assessment (Project's Effect on Total Countywide VMT):* The total countywide VMT per service population (defined as VMT generated by all trip types divided by all residents and employees) is compared for the 2040 Plus Project condition against the 2040 No Project condition. If the Project causes total countywide VMT per service population to increase, this would constitute a significant impact.[1]

[1] Note that the cumulative analysis is only required by the CCTA Guidance if the project-level impact is found to be significant.

1.3.4 Transportation Impacts and Mitigation Measures

Threshold 1: Would implementation of the Project conflict with an applicable program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Impact 1: Implementation of the Project would not conflict with an applicable program, plan, ordinance, or policy addressing the transit system. (*Less than Significant Impact*)

This impact would be significant if the Project would disrupt existing transit services or facilities, conflict with an existing or planned transit facility, or conflicts with transit policies adopted by the City of San Ramon or the Contra Costa Transportation Authority.

Development under the 2040 General Plan would not obstruct existing transit services or facilities, nor would it conflict with existing or planned facilities. All new development would be subject to City discretionary review, allowing the City to ensure that project designs would not interfere with transit operations. Buildout of the proposed 2040 General Plan would increase the number of potential transit users on the various transit systems serving the city. Increased users would result in a correlated increase in demand for transit. Additionally, roadway traffic congestion caused from population and employment growth in the city facilitated by the 2040 General Plan could affect transit corridors by increasing travel times and decreasing headway reliability for transit vehicles.

The Traffic and Circulation Element of the 2040 General Plan contains the following guiding policies and implementing policies that would support reducing traffic congestion and improving transit connectivity:

Guiding Policy – Circulation and Land Use, 5.1-G-1: Maintain acceptable LOS and ensure that future land uses and the circulation system are in balance.

5.1-I-7 Implement the following transportation programs: Transportation Demand Management Program (TDM) Program, Street Smarts Traffic Safety Program, Residential Traffic Calming Program, and TRAFFIX Program.

Guiding Policy – Regional Transportation Planning, 5.2-G-1: Actively participate in local and regional transportation planning.

5.2-I-1 Continue to develop and implement Action Plans for Routes of Regional Significance, in cooperation with the Southwest Area Transportation Committee (SWAT), the Contra Costa Transportation Authority (CCTA), and the Tri-Valley Transportation Council (TVTC).

5.2-I-2 Continue to implement the Tri-Valley Transportation Action Plan through participation in the Tri-Valley Transportation Council (TVTC).

5.2-I-3 Participate in programs to mitigate regional traffic congestion.

5.2-I-4 Ensure local jurisdiction consistency with the goals and policies of the Contra Costa Congestion Management Plan (CMP).

5.2-I-5 Emphasize regional transportation demand management and trip reduction strategies as alternatives to improvements to existing transportation facilities and the construction of new transportation facilities.

5.2-I-6 Identify and consider the impacts of land use decisions on regional as well as local transportation facilities.

Guiding Policy – Complete Streets, 5.3-G-1: Encourage transportation facilities that consider the users' safety and allow for all modes of travel based on local conditions and needs of the community.

5.3-I-1 Maintain and periodically update Complete Streets Guidelines that establish local review and assessment criteria and encourage development of a multimodal transportation network to meet community needs.

5.3-I-2 Implement Complete Streets principles, as appropriate, for new roadway design and significant roadway rehabilitation.

5.3-I-3 Coordinate the implementation of Complete Streets concepts, as appropriate, with ongoing transportation and congestion relief programs such as the TDM Program, Street Smarts Traffic Safety Program, Residential Traffic Calming Program, Safe Routes to School Program and TRAFFIX Program.

5.3-I-4 Encourage Complete Streets concepts as a VMT and greenhouse gas reduction strategy.

5.3-I-5 Consider the access and mobility needs of special needs groups such as seniors and persons with disabilities in the implementation of all Complete Streets projects.

Guiding Policy – Arterial Roadways, 5.4-G-1: Design arterial roadways to efficiently move inter-city traffic, thereby minimizing through-traffic in residential areas of the City.

5.4-I-1 Ensure that adequate north-south and east-west arterial capacity is provided to accommodate future travel demand and, where appropriate, implement Complete Streets concepts pursuant to Policy 5.3-G-1.

5.4-I-7 Minimize congestion on arterials by implementing the policies in the Complete Streets, Transportation Demand Management and Public Transit sections of the Circulation Element.

Guiding Policy – Collector and Local Roadways, 5.5-G-1: Design collector and local roadways to improve circulation and to connect residential and commercial areas of the City while incorporating Complete Streets concepts pursuant to Policy 5.3-I-2 where appropriate.

5.5-I-4 Construct improvements to collector roadways.

5.5-I-5 Mitigate traffic that impacts collector streets as a result of new residential and commercial development.

Guiding Policy – Transportation Demand Management, 5.6-G-1: Utilize Transportation Demand Management (TDM) strategies as an integral component of the City's transportation program to reduce total vehicle trips and VMT on San Ramon roadways and reduce the corresponding vehicle emissions that promote regional air quality improvements.

5.6-I-1 Engage with public agencies and other jurisdictions to promote local and regional public transit service in San Ramon as part of a multimodal and Complete Streets strategy.

5.6-I-2 Encourage and assist major employers and property managers of commercial sites with 50 or more employees to reduce the number of single-occupant vehicles by participating in the City's TDM programs, including the commuter benefit program, and programs provided by the Bay Area Air Quality Management District.

5.6-I-3 Encourage additional local bus or other public transportation service providers to and from regional transit lines. The City shall strive to improve the transit service to and from all neighborhoods and commercial districts in San Ramon.

5.6-I-4 Preserve options for future public transit and alternative transportation uses when designing improvements for roadways such as Bollinger Canyon Road Corridor within Dougherty Valley.

5.6-I-5 Encourage future transit uses within the I-680 corridor right-of-way and within the City of San Ramon.

5.6-I-6 Engage with other jurisdictions and agencies to coordinate the City's TDM programs with regional plans and action plans that are aimed at reducing traffic congestion and VMT, and improving air quality.

5.6-I-8 Encourage alternative public transportation programs and obtain funding for new TDM projects or programs.

5.6-I-9 Encourage employers and commercial complexes to emphasize public transit services or private alternatives to the single-occupant vehicle.

5.6-I-10 Work with transit providers to situate amenity rich transit stops and shelters at convenient and safe locations.

5.6-I-11 Promote increased transit ridership through the use of Transportation Management Associations and other employer-based transit programs, equip buses with bike racks, and make transit information readily accessible in a smart phone-friendly format.

5.6-I-12 Coordinate with Caltrans and transit providers to identify and implement park and ride lots with updated amenities with convenient access to public transit facilities, often called mobility hubs.

5.6-I-13 Work with the San Ramon Valley Unified School District and other appropriate agencies and organizations to reduce vehicle trips through the provision of transit programs, the TRAFFIX school bus program and promoting carpooling, bicycling, and walking.

5.6-I-15 Work with local transit providers to increase and expand weekend transit service and late night service from regional rail and transit hubs.

5.6-I-16 Explore opportunities for the location or relocation of a transit center and/or multiple Mobility Hubs within Bishop Ranch Business Park to better geographically balance the public transit needs for the City.

Guiding Policy – Public Transit, 5.6-G-2: Encourage trip reduction measures in an effort to reduce VMT, improve air quality, and reduce greenhouse gas emissions.

5.6-I-19 Encourage infill, Transit-Oriented Development (TOD) and first and last mile transit access connections as vehicle-miles-traveled reduction strategies for existing and proposed development.

The 2040 General Plan goals and policies listed above encourage an increase in transit ridership, decreased dependence on motor vehicles, and reduce transit delays. While the proposed Project could add peak hour transit riders, implementation of the proposed project would not disrupt existing or interfere with planned transit services or facilities.

The Contra Costa Transportation Authority Countywide Transportation Plan (2017) contains goals and policies to manage the county's transportation system, including several policies relating to the preservation and enhancement of transit service, in partnership with local jurisdictions, as the county grows. These goals and policies are consistent with the 2040 General Plan goals and policies and will result in coordinated planning for the expansion of transit service to meet demand as the City of San Ramon grows under the 2040 General Plan.

Goal 1: Support the efficient, safe, and reliable movement of people and goods using all available travel modes.

Policy 1.1: Efficiency. Increase the efficiency of highways and arterial roads through capital investments, operational enhancements, and use of technology

Policy 1.2: Partnerships. Engage in partnerships with jurisdictions, stakeholders, and other agencies to identify and implement strategies for managing congestion and increasing multimodal mobility.

Policy 1.4: Street and Roadway Improvements. Improve the highway and arterial system to influence the location and nature of anticipated growth in accordance with the General Plans of local jurisdictions and consistent with the Authority's adopted Countywide Transportation Plan.

Goal 2: Manage growth to sustain Contra Costa's economy, preserve its environment and support its communities.

Policy 2.1: Cooperative Planning. Continue to require cooperative transportation and land use planning among Contra Costa County, cities, towns, and transportation agencies.

Goal 3: Expand safe, convenient, and affordable alternatives to the single-occupant vehicle.

Policy 3.1: Transit Service Expansion. Help fund the expansion of existing transit services and regional express lanes, and maintenance of existing operations, including BART, bus transit, school buses, and paratransit.

Policy 3.2: Transit Service Coordination. Link transit investments to increased coordination and integration of public transit services, and improved connections between travel modes.

Policy 3.3 Complete Streets. Require local jurisdictions to incorporate policies and standards for "complete streets" that support transit, bicycle and pedestrian access in new developments, infill development areas ("Priority Development Areas"), and transit priority areas.

Policy 3.5: Alternate Modes. Promote the formation of more carpools and vanpools, and greater use of transit, bicycling, and walking.

Goal 4: Maintain the transportation system.

Policy 4.1: Stable Funding Sources. Advocate for stable sources of funds for transit operations and other programs that support the transportation system.

Policy 4.2: Maintenance. Require and fund programs for effective preventive maintenance and rehabilitation of the transportation system ("deferred maintenance").

Policy 4.3: Long-Term Needs. Secure funding that will maintain the long-term health of all components of the transportation system.

Based on the discussion above, this impact would be **less than significant**.

Mitigation Measure: None required.

Impact 2: Implementation of the Project would not conflict with an applicable program, plan, ordinance, or policy addressing the roadway system. *(Less than Significant Impact)*.

This impact would be significant if the Project would disrupt existing or planned roadway facilities or conflict with an applicable program, plan, ordinance, or policy regarding the roadway system.

The 2040 General Plan includes modifications to existing street facilities to create a more pedestrian- and bicycle-oriented street network. These modifications could cause existing and future local and regional traffic to circulate differently. The expected influence on existing and future traffic would be minimal because roadway modifications would conform to State and local standards and generally be implemented to improve circulation. Overall, the 2040 General Plan's proposed bicycle and pedestrian improvements would not conflict with existing or planned roadway facilities because the proposed street changes are additions of pedestrian and bicycle facilities and do not specifically propose any reduction in vehicle lanes. While the City has the ability to consider lane reductions to facilitate provision of new bicycle facilities, such projects would be subject to the appropriate planning and environmental review processes at the time that they are proposed.

The Traffic and Circulation Element of the 2040 General Plan contains the following guiding policies and implementing policies that guide development and maintenance of the city's roadway network:

Guiding Policy – Regional Transport Planning, 5.2-G-1: Actively participate in local and regional transportation planning.

5.2-I-1 Continue to develop and implement Action Plans for Routes of Regional Significance, in cooperation with the Southwest Area Transportation Committee (SWAT), the Contra Costa Transportation Authority (CCTA), and the Tri-Valley Transportation Council (TVTC).

5.2-I-2 Continue to implement the Tri-Valley Transportation Action Plan through participation in the Tri-Valley Transportation Council (TVTC).

5.2-I-5 Emphasize regional transportation demand management and trip reduction strategies as alternatives to improvements to existing transportation facilities and the construction of new transportation facilities.

Guiding Policy – Complete Streets, 5.3-G-1: Encourage transportation facilities that consider the users' safety and allow for all modes of travel based on local conditions and needs of the community.

5.3-I-1 Maintain and periodically update Complete Streets Guidelines that establish local review and assessment criteria and encourage development of a multimodal transportation network to meet community needs.

5.3-I-2 Implement Complete Streets principles, as appropriate, for new roadway design and significant roadway rehabilitation.

5.3-I-3 Coordinate the implementation of Complete Streets concepts, as appropriate, with ongoing transportation and congestion relief programs such as the TDM Program, Street Smarts Traffic Safety Program, Residential Traffic Calming Program, Safe Routes to School Program and TRAFFIX Program.

5.3-I-5 Consider the access and mobility needs of special needs groups such as seniors and persons with disabilities in the implementation of all Complete Streets projects.

Guiding Policy – Arterial Roadways, 5.4-G-1: Design arterial roadways to efficiently move inter-city traffic, thereby minimizing through-traffic in residential areas of the City.

5.4-I-1 Ensure that adequate north-south and east-west arterial capacity is provided to accommodate future travel demand and, where appropriate, implement Complete Streets concepts pursuant to Policy 5.3-G-1.

5.4-I-2 Implement the City's five-year Capital Improvement Plan.

5.4-I-3 Construct capacity and roadway efficiency improvements necessary to serve growth generated by development under the General Plan.

5.4-I-4 Maximize the carrying capacity of arterial roadways by controlling the number of intersections, minimizing residential and commercial driveway access, minimizing on-street parking, and requiring off-street parking strategies to meet the needs of each proposed project.

5.4-I-6 Make optimal use of federal, state, and other funding sources to complete circulation system improvements.

5.4-I-7 Minimize congestion on arterials by implementing the policies in the Complete Streets, Transportation Demand Management and Public Transit sections of the Circulation Element.

5.4-I-8 Encourage regional freight movement on freeways and other appropriate routes; evaluate and implement vehicle weight limits as appropriate on arterial, collector and local roadways to mitigate truck traffic impacts in the community.

5.4-I-9 Specify hauling routes for transporting hazardous materials that minimize the risk to people and property.

Guiding Policy – Collector and Local Roadways, 5.5-G-1: Design collector and local roadways to improve circulation and to connect residential and commercial areas of the City while incorporating Complete Streets concepts pursuant to Policy 5.3-I-2 where appropriate.

5.5-I-1 Implement residential traffic calming measures, as warranted, and police enforcement to mitigate speeding and other traffic impacts in residential areas of the City.

5.5-I-2 Continue to implement traffic-control measures and design features that support the City's goals for collector roadways.

5.5-I-3 Continue to implement traffic-control measures, residential traffic calming, and design features that support the City's goals for local roadways.

5.5-I-4 Construct capacity and roadway improvements necessary to serve growth generated by development under the General Plan.

Implementation of the above 2040 General Plan policies would ensure consistency with circulation system policies related to roadway facilities.

Growth associated with implementation of the 2040 General Plan could interfere with the operation of existing roadway facilities or conflict with planned roadway facilities; however, implementation of the aforementioned roadway facility policies would minimize such potential conflicts. Therefore, with respect to conflicts with circulation system policies related to roadway facilities, operational impacts of the 2040 General Plan would be **less than significant.**

Mitigation Measure: None Required.

Impact 3: Implementation of the Project would not conflict with an applicable program, plan, ordinance, or policy addressing the bicycle system. (*Less than Significant Impact*)

The project would create a significant impact related to the bicycle system if the 2040 General Plan:

1. Disrupts existing bicycle facilities;
2. Interferes with planned bicycle facilities; or,
3. Conflicts with applicable bicycle system plans, guidelines, policies, or standards.

Growth in residential and non-residential uses under the 2040 General Plan could result in more bicycle use on existing facilities. The 2040 General Plan includes complete streets policies, new bicycle facilities, and transportation and circulation goals and policies to accommodate increased bicycle demands generated by new development. This network would accommodate bicycle demand generated by the land development.

The Traffic and Circulation Element of the 2040 General Plan contains the following guiding policies and implementing policies that guide development and maintenance of the city's bicycle network and encourage bicycle transportation in the city:

Guiding Policy – Circulation and Land Use, 5.1-G-1: Maintain acceptable LOS and ensure that future land uses and the circulation system are in balance.

5.1-I-7 Implement the following transportation programs: Transportation Demand Management Program (TDM) Program, Street Smarts Traffic Safety Program,

Residential Traffic Calming Program, Safe Routes to School Program, TRAFFIX Program, and the Engineering Services Department's Traffic Engineering component.

5.1-I-8 Implement a Safe Routes to School Program to address access and safety issues on streets adjacent to schools in San Ramon.

Guiding Policy – Complete Streets, 5.3-G-1: Encourage transportation facilities that consider the users' safety and allow for all modes of travel based on local conditions and needs of the community.

5.3-I-1 Maintain and periodically update Complete Streets Guidelines that establish local review and assessment criteria and encourage development of a multimodal transportation network to meet community needs.

5.3-I-2 Implement Complete Streets principles, as appropriate, for new roadway design and significant roadway rehabilitation.

5.3-I-3 Coordinate the implementation of Complete Streets concepts, as appropriate, with ongoing transportation and congestion relief programs such as the TDM Program, Street Smarts Traffic Safety Program, Residential Traffic Calming Program, Safe Routes to School Program and TRAFFIX Program.

5.3-I-4 Encourage Complete Streets concepts as a VMT and greenhouse gas reduction strategy.

5.3-I-5 Consider the access and mobility needs of special needs groups such as seniors and persons with disabilities in the implementation of all Complete Streets projects.

Guiding Policy – Transportation Demand Management, 5.6-G-1: Utilize Transportation Demand Management (TDM) strategies as an integral component of the City's transportation program to reduce total vehicle trips and VMT on San Ramon roadways and reduce the corresponding vehicle emissions that promote regional air quality improvements.

5.6-I-7 Encourage new development to include a mix of uses and Complete Streets concepts that will allow people to walk and bike between destinations and reduce the amount of automobile VMT.

5.6-I-11 Promote increased transit ridership through the use of Transportation Management Associations and other employer-based transit programs, equip buses with bike racks, and make transit information readily accessible in a smart phone-friendly format.

5.6-I-13 Work with the San Ramon Valley Unified School District and other appropriate agencies and organizations to reduce vehicle trips through the provision of transit programs, the TRAFFIX school bus program and promoting carpooling, bicycling, and walking.

Guiding Policy – Bicycle and Pedestrian Routes, 5.7-G-1: Encourage bicycling and walking as alternatives to driving, consistent with Complete Streets concepts.

5.7-I-1 Establish a network of on- and off-street bicycle routes to encourage their use for commute, recreational, and other trips. Improve and expand bicycle routes for commuters in San Ramon and between San Ramon and neighboring jurisdictions.

5.7-I-2 Develop bicycle routes that provide access to regional employment centers, shopping centers, public facilities, transit centers, schools, and parks.

5.7-I-3 Continue to emphasize the Iron Horse Trail as a major north-south route for non-motorized modes of transportation including walking, biking, rollerblading, and scooters by improving connectivity and enhancing amenities for these modes.

5.7-I-4 Encourage future development along the Iron Horse Trail corridor to provide connection points and adjacent amenities, as appropriate.

5.7-I-5 Require bicycle parking, storage, and other support facilities as part of new office, retail, housing, and public facilities developments.

5.7-I-6 Continue to promote and implement through the development review process, continuous circulation facilities within commercial districts and residential neighborhoods to enhance connectivity, and promote pedestrian and bicycle modes of transportation consistent with Complete Streets concepts.

5.7-I-8 Pursue grant funding for implementation of projects identified in the adopted Bicycle Master Plan and Walking District Master Plan, including funding from State and regional sources.

5.7-I-9 Implement roadway improvement projects to minimize both temporary and permanent reductions in bicycle and pedestrian mobility and/or accessibility.

5.7-I-10 Work with neighboring jurisdictions to ensure that continuity in bicycle and pedestrian networks is provided at jurisdictional boundaries.

5.7-I-11 Work with Caltrans and other appropriate agencies to improve bicycle and pedestrian mobility at freeway crossings.

5.7-I-12 Promote educational efforts about traffic laws and safe practices for all modes of transportation.

5.7-I-13 Prioritize bicycle network improvements in the core area of San Ramon, including construction of new facilities and actions to remove barriers to cycling as identified in the San Ramon Bicycle Master Plan, in order to support development in the City's Priority Development Areas (PDAs).

The 2040 General Plan would encourage bicycling by improving bicycle connectivity with a comprehensive community-wide network of on-street and off-street bicycle facilities as defined in the *San Ramon Bicycle Master Plan (2018)*. Implementation of the 2040 General Plan would not interfere with existing bicycle facilities or conflict with planned bicycle facilities or adopted bicycle system plans, guidelines, policies, or standards. Furthermore, implementation of the 2040 General Plan would create new bicycle facilities consistent with the *San Ramon Bicycle Master Plan*, which would have a beneficial effect on bicycle circulation and access. Therefore, this impact would be **less than significant**.

Mitigation Measure: None required.

Impact 4: Implementation of the Project would not conflict with an applicable program, plan, ordinance, or policy addressing the pedestrian system. (*Less than Significant Impact*)

The project would create a significant impact related to the pedestrian system if the 2040 General Plan:

1. Disrupts existing pedestrian facilities; or
2. Interferes with planned pedestrian facilities; or
3. Conflicts with applicable pedestrian system plans, guidelines, policies, or standards.

Growth in residential and non-residential uses under the 2040 General Plan could result in more use and demand on existing pedestrian facilities. The 2040 General Plan includes complete streets policies, new pedestrian facilities, and transportation and circulation goals and policies to accommodate increased pedestrian demands generated by the development envisioned in the 2040 General Plan. The 2040 General Plan would encourage walking by improving pedestrian facilities and connectivity with a safe and continuous pedestrian network to shorten walking distances and improve pedestrian connections to popular local destinations.

The Traffic and Circulation Element of the 2040 General Plan contains the following guiding policies and implementing policies that guide development and maintenance of the city's pedestrian network and encourage walking in the city:

Guiding Policy – Circulation and Land Use, 5.1-G-1: Maintain acceptable LOS and ensure that future land uses and the circulation system are in balance.

5.1-I-7 Implement the following transportation programs: Transportation Demand Management Program (TDM) Program, Street Smarts Traffic Safety Program, Residential Traffic Calming Program, Safe Routes to School Program, TRAFFIX Program, and the Engineering Services Department's Traffic Engineering component.

5.1-I-8 Implement a Safe Routes to School Program to address access and safety issues on streets adjacent to schools in San Ramon.

Guiding Policy – Complete Streets, 5.3-G-1: Encourage transportation facilities that consider the users' safety and allow for all modes of travel based on local conditions and needs of the community.

5.3-I-1 Maintain and periodically update Complete Streets Guidelines that establish local review and assessment criteria and encourage development of a multimodal transportation network to meet community needs.

5.3-I-2 Implement Complete Streets principles, as appropriate, for new roadway design and significant roadway rehabilitation.

5.3-I-3 Coordinate the implementation of Complete Streets concepts, as appropriate, with ongoing transportation and congestion relief programs such as the TDM Program, Street Smarts Traffic Safety Program, Residential Traffic Calming Program, Safe Routes to School Program and TRAFFIX Program.

5.3-I-4 Encourage Complete Streets concepts as a VMT and greenhouse gas reduction strategy.

5.3-I-5 Consider the access and mobility needs of special needs groups such as seniors in the implementation of all Complete Streets projects.

Guiding Policy – Transportation Demand Management, 5.6-G-1: Utilize Transportation Demand Management (TDM) strategies as an integral component of the City's transportation program to reduce total vehicle trips on San Ramon roadways and reduce the corresponding vehicle emissions that promote regional air quality improvements.

5.6-I-7 Encourage new development to include a mix of uses and Complete Streets concepts that will allow people to walk and bike between destinations and reduce the amount of automobile vehicle-miles-traveled.

5.6-I-13 Work with the San Ramon Valley Unified School District and other appropriate agencies and organizations to reduce vehicle trips through the provision of transit programs, the TRAFFIX school bus program and promoting carpooling, bicycling, and walking.

Guiding Policy – Bicycle and Pedestrian Routes, 5.7-G-1: Encourage bicycling and walking as alternatives to driving, consistent with Complete Streets concepts.

5.7-I-3 Continue to emphasize the Iron Horse Trail as a major north-south route for non-motorized modes of transportation including walking, biking, rollerblading, and scooters by improving connectivity and enhancing amenities for these modes.

5.7-I-4 Encourage future development along the Iron Horse Trail corridor to provide connection points and adjacent amenities, as appropriate.

5.7-I-6 Continue to promote and implement through the development review process, continuous circulation facilities within commercial districts and residential neighborhoods to enhance connectivity, and promote pedestrian and bicycle modes of transportation consistent with Complete Streets concepts.

5.7-I-7 Continue to implement accessibility standards for seniors and physically disabled persons within the public rights-of-way.

5.7-I-8 Pursue grant funding for implementation of projects identified in the adopted Bicycle Master Plan and Walking District Master Plan, including funding from State and regional sources.

5.7-I-9 Implement roadway improvement projects to minimize both temporary and permanent reductions in bicycle and pedestrian mobility and/or accessibility.

5.7-I-10 Work with neighboring jurisdictions to ensure that continuity in bicycle and pedestrian networks is provided at jurisdictional boundaries.

5.7-I-11 Work with Caltrans and other appropriate agencies to improve bicycle and pedestrian mobility at freeway crossings.

5.7-I-12 Promote educational efforts about traffic laws and safe practices for all modes of transportation.

Implementation of the 2040 General Plan would not interfere with existing pedestrian facilities or conflict with planned pedestrian facilities or adopted pedestrian system plans, guidelines, policies, or standards. Furthermore, implementation of the 2040 General Plan would create new pedestrian facilities and have a beneficial effect on pedestrian circulation and access consistent with the *San Ramon Walking District Plan*. Therefore, this impact would be **less than significant**.

Mitigation Measure: None required.

Threshold 2: Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Impact 5: Implementation of the Project would generate home-based VMT per resident that is greater than 85% of the countywide average home-based VMT per resident, and home-based VMT per employee that is greater than 85 percent of the countywide average home-work VMT per employee. (*Significant and Unavoidable Impact, with Mitigation*)

Significance threshold 2 pertains to VMT. For the purposes of this evaluation, this impact would be significant if the implementation of the Project would result in citywide home-based VMT per resident that is higher than 85% of the 2022 baseline citywide average home-based VMT per resident; or if the Project would result in citywide home-work VMT per employee that is higher than 85% of the 2022 baseline citywide average home-work VMT per employee In addition, the impact would be significant if the 2040 countywide boundary VMT per service population increases with the Project.

See Section 1.3.3 for a description of the VMT impact analysis methodology.

1.3.4.1 Screening Analysis

The potential to screen the Project from a full VMT analysis was considered, as described below. The five key screening criteria are addressed. For the reasons given, it was determined that a full VMT analysis should be conducted for the Project.

1. **CEQA Exemption.** The project is not otherwise exempt from CEQA, so this criterion does not apply.
2. **Small Projects.** While it is possible that certain housing developments built under the 2040 General Plan would be 20 or fewer units, this screening test would need to be applied as a part of individual project review, and does not apply to the General Plan program as a whole.
3. **Local-Serving Uses.** This screening criteria is intended to apply to commercial uses, and is not relevant to residential project types. Since the 2040 General Plan land use changes focus on residential development, this criteria is not relevant to the impact analysis.
4. **Projects Located in Transit Priority Areas (TPAs).** There are no TPAs within the City of San Ramon. Therefore, this screening criteria does not apply to the evaluation of the Project.
5. **Projects Located in Low VMT Areas.** Screening based on location within a low-VMT area would be based on the VMT maps prepared by CCTA at the traffic analysis zone (TAZ) level, using the Contra Costa Countywide Travel Demand Model results. Certain TAZs may meet the criteria of low-VMT generating characteristics, and development projects within these TAZs could be presumed to have a less than significant impact with respect to VMT. However, since the 2040 General Plan proposes changes to residential development over a substantial portion of the city, such a screening assessment is not appropriate for the Project impact analysis.

1.3.4.2 VMT Analysis

1.3.4.2.1 Modeling Procedure

The Contra Costa Countywide Travel Demand Model (CCTA Model) was used to generate VMT estimates for the project. The CCTA Model allows analysts to forecast regional travel behavior as a function of local land use development decisions, transportation network infrastructure planning, and land use and network policies. The CCTA Model reflects data included in Plan Bay Area 2040, the Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) that was recently replaced with adoption of Plan Bay Area 2050 by the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG). CCTA has prepared a memorandum documenting the CCTA Model's consistency with Plan Bay Area 2040, and the model is currently the best available tool for analysis of VMT impacts.

Residential projects are evaluated based on the home-based VMT per resident VMT metric. Home-based VMT is defined as all home-based automobile vehicle trips traced back to the residence of the trip-maker. Non-home-based trips are excluded. This VMT includes the entire length of the trip. This home-based VMT is then divided by the number of residents to calculate home-based VMT per resident.

Non-residential uses are evaluated based on the home-work VMT per employee metric. Home-work VMT is defined as the employee commute trip to and from work, and excludes mid-day trips, vendor and delivery trips, and visitor trips to the work site.

The VMT calculations are done in the CCTA model via the production and attraction trip matrices to be able to attribute automobile vehicle trips to the residence of the trip-maker. The calculations are done to include all trips, including trips that leave the travel model area (the nine-county Bay Area). VMT for trips that leave the travel model area is adjusted to account for the part of the trip that occurs outside of the travel model area.

1.3.4.2.1 Land Use

Table 1 shows the citywide land uses under the Baseline (2022) conditions (from the CCTA model), 2040 No Project conditions (from the CCTA model) and 2040 With Project conditions with the housing growth proposed in the 2040 General Plan. A table showing the housing units at the TAZ level is included in the Appendix. The growth includes projects that are in the planning and entitlement process; changes proposed as part of the Housing Element update; and additional changes due to changes to City of San Ramon specific plans (refer to the EIR project description for more information). Note that the 2040 No Project CCTA model housing units for the city of San Ramon were reviewed and it was confirmed that the growth between 2022 and 2040 was higher than the number of units that are currently approved but not yet built. As such, the model accommodates the 2040 No Project land use growth envelope, on a citywide basis. It is noted that the remainder of the 2040 CCTA Model represents 2040 land use growth consistent with the Association of Bay Area Governments forecasts.

Table 1: City of San Ramon Housing Units

Scenario	Total Housing Units	Single-Family Units	Multi-Family Units
2022 Baseline (CCTA Model)	28,866	22,846	6,020
2040 No Project (CCTA Model)	34,311	26,093	8,218
2040 With Project	39,021	23,322	15,699
Growth: 2040 No Project – 2022 Baseline	5,445	3,247	2,198
Growth: 2040 With Project – 2022 Baseline	10,155	476	9,679

Source: CCTA Travel Demand Model (2022 & 2040 No Project); City of San Ramon and Rincon (2040 With Project).
Fehr & Peers May 2023.

1.3.4.2.2 VMT Results

Project Analysis

Table 2 presents the VMT results for the home-based VMT per resident, and **Table 3** presents the results for the home-work VMT per employee.

Table 2: Citywide Home-Based VMT Summary

Scenario	Home-Based VMT	Residents	Home-Based VMT Per Resident	County Average Home-Based VMT per Resident
2022 Baseline	1,681,358	82,472	20.4	17.2
Threshold[1]	---	---	**17.3**	**---**
2040 No Project	1,866,985	98,244	19.0	16.1
2040 With Project	1,949,237	104,864	**18.6**	16.0
Does Project meet Threshold?	---	---	No	---

1. 85% of 2022 Baseline Countywide Average
Source: CCTA Travel Demand Model; Fehr & Peers, May 2023.

Table 3: Citywide Home-Work VMT Summary

Scenario	Home-Work VMT	Employees	Home-Work VMT per Employee	County Average Home-Work VMT per Employee
2022 Baseline	790,561	52,564	15.0	15.0
Threshold[1]	---	---	**12.8**	**---**
2040 No Project	919,176	61,283	15.0	15.2
2040 With Project	910,270	61,283	**14.9**	15.2
Does Project meet Threshold?	---	---	No	---

1. 85% of 2022 Baseline Countywide Average
Source: CCTA Travel Demand Model; Fehr & Peers, May 2023.

The analysis indicates the following:

- Under 2022 baseline conditions, the City of San Ramon home-based VMT per resident of 20.4 miles-per-resident is higher than the countywide average home-based VMT per resident of 17.2 miles-per-resident.
- In 2040 No Project and 2040 With Project conditions, the City of San Ramon home-based VMT per resident is projected to be higher than 85 percent of the 2022 baseline citywide home-based VMT per resident. Thus the 2040 General Plan would have a **significant** impact on home-based VMT per resident.
- Under 2022 baseline conditions, the City of San Ramon home-work VMT per employee of 15.0 miles-per-resident is equal to the countywide average home-work VMT per employee.
- In 2040 No Project and 2040 With Project conditions, the City of San Ramon home-work VMT per employee is projected to be higher than 85 percent of the 2022 baseline citywide home-work VMT per employee. Thus the 2040 General Plan would have a **significant** impact on home-work VMT per employee.
- Home-based VMT per resident rates in the county as a whole and in the City of San Ramon are projected to decline between 2022 and 2040.
- Home-work VMT per employee rates are projected to increase slightly in the county as a whole, but in the City of San Ramon they would stay constant under 2040 No Project conditions and decrease slightly under 2040 With Project conditions.
- The City of San Ramon 2040 With Project VMT rates are lower than the 2040 No Project VMT rates.

Because the VMT metrics above address conditions in the year 2040, with other countywide development included in the assessments, the impact with respect to home-based VMT per resident and home-work VMT per employee are considered **significant** for both Project and Cumulative conditions. Refer to section 1.3.4.2.3 for the mitigation measure for this impact.

Cumulative Analysis

The year 2040 total countywide VMT per service population (all residents and employees) is shown in **Table 4**. These metrics reflect VMT generated by all trips by all land uses in the county, as well as non-county generated trips travelling on county roadways (i.e., all VMT within the Contra Costa County boundary). As shown in the table, countywide boundary VMT per service population would decrease with the Project, reflecting the travel efficiency that generally results from more dense, mixed-use development provided with the Project. Therefore, the cumulative impact with respect to total countywide VMT per service population would be **less than significant**.

Table 4: Countywide VMT Summary

Metrics	2022 Baseline	2040 No Project	2040 With Project
Total	25,804,244	29,921,234	29,997,147
County Service Population	1,585,472	1,878,346	1,884,966
VMT/Service Population	16.28	15.93	15.91
Does VMT per service population decrease with Project?	---	---	Yes

Source: CCTA Travel Demand Model; Fehr & Peers, May 2023.

1.3.4.2.3 Mitigation Measure: Implement VMT Reduction Measures.

Because the 2040 General Plan land use changes were identified only for residential uses (i.e. no specific employment use changes were identified), this mitigation measure focuses on VMT reduction measures for residential project types.

Individual housing project development proposals that do not screen out from VMT impact analysis shall provide a quantitative VMT analysis using the methods applied in this EIR, with modifications if appropriate based on future changes the City of San Ramon practices and CCTA VMT analysis methodology guidelines. Projects which result in a significant impact shall include travel demand management measures and physical measures to reduce VMT. The CCTA's *Growth Management Program Implementation Guide* (Revised February 17, 2021), Appendix F (CCTA Recommended Methodology) describes options for mitigation of VMT impacts. The first two options below apply to development projects and plans, and the third applies at a Citywide scale.

1. The project applicant shall modify the project's characteristics to reduce VMT generated by the project prior to issuance of an occupancy permit. This might involve changing the density or mixture of land uses on the project site, or changing the project's location to one that is more accessible by transit or other travel modes. The effectiveness of such changes should be modeled using the analysis techniques described in Part 3, above.
2. The project applicant shall implement transportation demand management (TDM) or physical design measures to reduce VMT generated by the project prior to issuance of an occupancy permit. A description of such options is included below, .
3. The City shall participate in a CCTA-approved VMT impact fee program and/or VMT mitigation exchange/banking program, when it is completed and published by CCTA. (Note that CCTA is developing such a program for Contra Costa County.)

The City shall require preparation and implementation of project-level TDM Plans with the following TDM measures for future land use development projects facilitated by the 2040 General Plan that do not meet CCTA screening criteria and thresholds.

Table 5: VMT Reduction Mitigation Measures

CAPCOA Handbook Measure	Types of Projects	Core Elements
T-7: Commute Trip Reduction Marketing	Employment-based	*Thoughtful marketing strategy *Readily available commute information *Designated TDM Coordinator *Guaranteed Ride Home
T-8: Provide Ridesharing Program	Employment-based	*Participation in a TMA with ride-matching program *Preferential parking policies for carpools *Promotions and incentives such as gas cards at carpool formation
T-9: Implement Subsidized or Discounted Transit Program	Residential, School, Employment-based	*Location within 1/2 mile of major transit stop or high quality transit corridor *Participation in Commuter Benefits Program *Easy to sign up for incentives
T-11: Provide Employer Sponsored Vanpool / Point-to-Point Shuttles	Employment-based	*Coordinate logistics of vanpool program *Cover vanpool fares for riders through commute benefits program *Promote and facilitate vanpool creation
T-12: Price Workplace Parking	Employment-based	*Location within 1/2 mile of transit service *Priced at least $5 per day *On-street parking nearby is not readily available
T-13: Implement Employee Parking Cashout	Employment-based	*Parking is provided as benefit *On-street parking nearby is not readily available *Participants pledge to not drive to work
T-16: Unbundle Residential Parking Costs	Residential	*On-street parking nearby is not readily available *All parking is priced at a rate at least $30 per month
T-23: Community-Based Travel Planning	Residential, Retail, School	*Proactive outreach to all households in service area or project *Program Coordinator designated as lead in promoting non-auto transportation
T-10: Provide End-of-Trip Bicycle Facilities	All Projects	*Provision of secure bicycle parking in the form of lockers, a locked storage room, or an attended storage facility *(For non-residential): Provision of lockers, showers, and changing rooms
T-21A: Implement Carshare Program / Provide Carshare Parking	All Projects	*Dedicate parking for carshare vehicles *Identify carshare partner
T-15: Reduce Parking Supply	Residential	*On-street parking nearby is not readily available
T-18: Provide Pedestrian Network Improvements:	All Projects	Completion of one or more projects identified in the San Ramon Bicycle Master Plan
T-19-A and T-19-B: Construct or Improve Bicycle Facility/Bicycle Boulevard	All Projects	
T-20: Expand Bikeway Network	All Projects	

CAPCOA Handbook Measure	Types of Projects	Core Elements
T-26: Increase Transit Frequency	All Projects in PDAs	Increase the frequency of transit service by providing funding for more operators and vehicles
T-25: Increase Transit Coverage	All Projects	Expand transit service to areas without access to it, or expand to later/earlier hours.
T-23: Community-Based Travel Planning	Residential, Retail, School	*Proactive outreach to all households in service area or project *Program Coordinator designated as lead in promoting non-auto transportation
T-22: Bikeshare/Scootershare	All Projects in PDAs	Fund and implement a program providing e-bikes or scooters available on demand. Ideally pursue a "dockless" system.
Free E-Bike Program	All Projects	Provide e-bikes free of charge to households pledging to reduce vehicle trips

Source: *Handbook for Analyzing Greenhouse Gas Emissions Reductions, Assessing Climate Change Vulnerabilities, and Advancing Health and Equity* (CAPCOA, December 2021).

Because the effectiveness of the above measures in reducing the VMT impacts of new development under the 2040 General Plan to a less than significant level cannot be determined in this analysis, this impact remains **significant and unavoidable with mitigation**.

Threshold 3: Would the Project substantially increase hazards due to a geometric design feature (e.g. sharp curves of dangerous intersections) or incompatible uses (e.g. farm equipment)?

Impact 6: The proposed 2040 General Plan is a program-level plan that does not directly address project-level design features. Roadway improvements and site access measures would be designed and reviewed in accordance with City standards. *(Less than Significant impact.)*

The 2040 General Plan is a program-level document that does not directly address project-level design features or building specifications. San Ramon maintains improvement standards that guide the construction of new transportation facilities to minimize design hazards for all users of the system. Through the environmental review process, land use proposals that would add traffic to streets not designed to current standards are evaluated. If needed, mitigation measures are identified therein, and the project is conditioned to construct or provide funding for an improvement that would minimize or eliminate the hazard. Typical improvements Include shoulder widening, adding turn pockets, adding sidewalks or crosswalks, realigning sharp curves, prohibiting certain turning movements, signalizing intersections, and increasing sight distance, among other measures. New and upgraded roadways needed to accommodate new development would be designed according to applicable Federal, State, and local design standards. Development and infrastructure projects in San Ramon would be required to comply with the 2040 General Plan, San Ramon Municipal Code, and applicable State and local regulations. As a result, and in consideration of the proposed 2040 General Plan's policies regarding infrastructure safety,

listed below, this impact would be less than significant. The 2040 General Plan establishes the following goals and policies that are intended to result in roadway designs that safely accommodate all users:

Guiding Policy – Circulation and Land Use, 5.1-G-1: Maintain acceptable LOS and ensure that future land uses and the circulation system are in balance.

5.1-I-1 Strive to maintain traffic LOS C or better as the standard at all intersections with a maximum LOS D during a.m. and p.m. peak periods.

5.1-I-2 Accept LOS E during a.m. and p.m. peak periods with the possibility of signalized intersections at or closely approaching the limits of LOS E (average control delay <=80 seconds/vehicle), only on arterial routes bordered by non-residential development where improvements to meet the City's LOS standard would be prohibitively costly or disruptive.

5.1-I-3 Require new development provide traffic impact studies if the project would generate 50 or more net new peak hour vehicle trips and a VMT assessment based on adopted local, regional, and/or State technical criteria. Preparation of traffic impact studies and/or VMT assessments may also be determined or waived by the City Traffic Engineer.

5.1-I-4 Identify and implement mitigations based on traffic studies and VMT assessments.

5.1-I-5 Implement uniform design standards for City arterials, collectors, local streets, and private roadways.

5.1-I-6 Monitor key intersection LOS on a regular basis and document the results.

5.1-I-7 Implement the following transportation programs: Transportation Demand Management Program (TDM) Program, Street Smarts Traffic Safety Program, Residential Traffic Calming Program, and TRAFFIX Program.

5.1-I-8 Implement a Safe Routes to School Program to address access and safety issues on streets adjacent to elementary schools in San Ramon.

Guiding Policy – Complete Streets, 5.3-G-1: Encourage transportation facilities that consider the users' safety and allow for all modes of travel based on local conditions and needs of the community.

5.3-I-1 Maintain and periodically update Complete Streets Guidelines that establish local review and assessment criteria and encourage development of a multimodal transportation network to meet community needs.

5.3-I-2 Implement Complete Streets principles, as appropriate, for new roadway design and significant roadway rehabilitation.

5.3-I-3 Coordinate the implementation of Complete Streets concepts, as appropriate, with ongoing transportation and congestion relief programs such as the TDM Program, Street Smarts Traffic Safety Program, Residential Traffic Calming Program, Safe Routes to School Program and TRAFFIX Program.

5.3-I-5 Consider the access and mobility needs of special needs groups such as seniors and persons with disabilities in the implementation of all Complete Streets projects.

Guiding Policy – Arterial Roadways, 5.4-G-1: Design arterial roadways to efficiently move inter-city traffic, thereby minimizing through-traffic in residential areas of the City.

5.4-I-1 Ensure that adequate north-south and east-west arterial capacity is provided to accommodate future travel demand and, where appropriate, implement Complete Streets concepts pursuant to Policy 5.3-G-1.

5.4-I-2 Implement the City's five-year Capital Improvement Plan.

5.4-I-3 Construct capacity and roadway efficiency improvements necessary to serve growth generated by development under the General Plan.

5.4-I-4 Maximize the carrying capacity of arterial roadways by controlling the number of intersections, minimizing residential and commercial driveway access, minimizing on-street parking, and requiring off-street parking strategies to meet the needs of each proposed project.

5.4-I-7 Minimize congestion on arterials by implementing the policies in the Complete Streets, Transportation Demand Management and Public Transit sections of the Circulation Element.

5.4-I-8 Encourage regional freight movement on freeways and other appropriate routes; evaluate and implement vehicle weight limits as appropriate on arterial, collector and local roadways to mitigate truck traffic impacts in the community.

Guiding Policy – Collector and Local Roadways, 5.5-G-1: Design collector and local roadways to improve circulation and to connect residential and commercial areas of the City while incorporating Complete Streets concepts pursuant to Policy 5.3-I-2 where appropriate.

5.5-I-1 Implement residential traffic calming measures, as warranted, and police enforcement to mitigate speeding and other traffic impacts in residential areas of the City.

5.5-I-2 Continue to implement traffic-control measures and design features that support the City's goals for collector roadways.

5.5-I-3 Continue to implement traffic-control measures, residential traffic calming, and design features that support the City's goals for local roadways.

5.5-I-4 Construct capacity and roadway improvements necessary to serve growth generated by development under the General Plan.

Guiding Policy – Transportation Demand Management, 5.6-G-1: Utilize Transportation Demand Management (TDM) strategies as an integral component of the City's transportation program to reduce total vehicle trips and VMT on San Ramon roadways and reduce the corresponding vehicle emissions that promote regional air quality improvements.

5.6-I-4 Preserve options for future public transit and alternative transportation uses when designing improvements for roadways such as Bollinger Canyon Road Corridor within Dougherty Valley.

5.6-I-10 Work with transit providers to situate amenity-rich transit stops and shelters at convenient and safe locations.

Guiding Policy – Bicycle and Pedestrian Routes, 5.7-G-1: Encourage bicycling and walking as alternatives to driving, consistent with Complete Streets concepts.

5.7-I-1 Establish a network of on- and off-street bicycle routes to encourage their use for commute, recreational, and other trips. Improve and expand bicycle routes for commuters in San Ramon and between San Ramon and neighboring jurisdictions.

5.7-I-6 Continue to promote and implement through the development review process, continuous circulation facilities within commercial districts and residential neighborhoods to enhance connectivity, and promote pedestrian and bicycle modes of transportation consistent with Complete Streets concepts.

5.7-I-7 Continue to implement accessibility standards for seniors and physically disabled persons within the public rights-of-way.

5.7-I-9 Implement roadway improvement projects to minimize both temporary and permanent reductions in bicycle and pedestrian mobility and/or accessibility.

5.7-I-10 Work with neighboring jurisdictions to ensure that continuity in bicycle and pedestrian networks is provided at jurisdictional boundaries.

5.7-I-11 Work with Caltrans and other appropriate agencies to improve bicycle and pedestrian mobility at freeway crossings.

5.7-I-12 Prioritize bicycle network improvements in the core area of San Ramon, including construction of new facilities and actions to remove barriers to cycling as identified in the San Ramon Bicycle Master Plan, in order to support development in the City's Priority Development Areas (PDAs).

The above goals and policies are intended to result in roadway designs that safely accommodate all users including pedestrians, bikes, and vehicles. The 2040 General Plan does not directly propose any project features or incompatible uses that could increase hazards within the city. Therefore, this impact would be **less than significant.**

Mitigation Measure: None required.

Threshold 4: Would the Project result in inadequate emergency access?

Impact 7: The proposed 2040 General Plan identifies circulation goals and policies that would support emergency access throughout San Ramon. ***(Less than Significant impact.)***

The proposed 2040 General Plan does not propose specific development or infrastructure projects, therefore does not propose any developments or projects that could result in inadequate emergency access. The purpose of the 2040 General Plan in terms of transportation is to improve the overall performance of the transportation network for all modes of transportation. The 2040 General Plan would have a significant impact on emergency access if roadway geometric design features were not designed to City standards and standard engineering practices were not followed, thereby resulting in obstacles to emergency responders. The 2040 General Plan includes the following goals and policies to ensure adequate emergency access to sites throughout San Ramon:

Guiding Policy – Circulation and Land Use, 5.1-G-1: Maintain acceptable LOS and ensure that future land uses and the circulation system are in balance.

5.1-I-1 Strive to maintain traffic LOS C or better as the standard at all intersections with a maximum LOS D during a.m. and p.m. peak periods.

5.1-I-2 Accept LOS E during a.m. and p.m. peak periods with the possibility of signalized intersections at or closely approaching the limits of LOS E (average control delay <=80 seconds/vehicle), only on arterial routes bordered by non-residential development where improvements to meet the City's LOS standard would be prohibitively costly or disruptive.

5.1-I-5 Implement uniform design standards for City arterials, collectors, local streets, and private roadways.

5.1-I-6 Monitor key intersection LOS on a regular basis and document the results.

Guiding Policy – Regional Transportation Planning, 5.2-G-1: Actively participate in local and regional transportation planning.

5.2-I-3 Participate in programs to mitigate regional traffic congestion.

Guiding Policy – Complete Streets, 5.3-G-1: Encourage transportation facilities that consider the users' safety and allow for all modes of travel based on local conditions and needs of the community.

5.3-I-1 Maintain and periodically update Complete Streets Guidelines that establish local review and assessment criteria and encourage development of a multimodal transportation network to meet community needs.

5.3-I-2 Implement Complete Streets principles, as appropriate, for new roadway design and significant roadway rehabilitation.

5.3-I-3 Coordinate the implementation of Complete Streets concepts, as appropriate, with ongoing transportation and congestion relief programs such as the TDM Program, Street Smarts Traffic Safety Program, Residential Traffic Calming Program, Safe Routes to School Program and TRAFFIX Program.

5.3-I-5 Consider the access and mobility needs of special needs groups such as seniors and persons with disabilities in the implementation of all Complete Streets projects.

Guiding Policy – Arterial Roadways, 5.4-G-1: Design arterial roadways to efficiently move inter-city traffic, thereby minimizing through-traffic in residential areas of the City.

5.4-I-1 Ensure that adequate north-south and east-west arterial capacity is provided to accommodate future travel demand and, where appropriate, implement Complete Streets concepts pursuant to Policy 5.3-G-1.

5.4-I-2 Implement the City's five-year Capital Improvement Plan.

5.4-I-3 Construct capacity and roadway efficiency improvements necessary to serve growth generated by development under the General Plan.

5.4-I-4 Maximize the carrying capacity of arterial roadways by controlling the number of intersections, minimizing residential and commercial driveway access, minimizing on-street parking, and requiring off-street parking strategies to meet the needs of each proposed project.

5.4-I-7 Minimize congestion on arterials by implementing the policies in the Complete Streets, Transportation Demand Management and Public Transit sections of the Circulation Element.

5.4-I-8 Encourage regional freight movement on freeways and other appropriate routes; evaluate and implement vehicle weight limits as appropriate on arterial, collector and local roadways to mitigate truck traffic impacts in the community.

Guiding Policy – Collector and Local Roadways, 5.5-G-1: Design collector and local roadways to improve circulation and to connect residential and commercial areas of the City while incorporating Complete Streets concepts pursuant to Policy 5.3-I-2 where appropriate.

5.5-I-1 Implement residential traffic calming measures, as warranted, and police enforcement to mitigate speeding and other traffic impacts in residential areas of the City.

5.5-I-2 Continue to implement traffic-control measures and design features that support the City's goals for collector roadways.

5.5-I-3 Continue to implement traffic-control measures, residential traffic calming, and design features that support the City's goals for local roadways.

5.5-I-4 Construct capacity and roadway improvements necessary to serve growth generated by development under the General Plan.

5.5-I-5 Mitigate traffic impacts on collector streets as a result of new residential and commercial development.

Guiding Policy – Bicycle and Pedestrian Routes, 5.7-G-1: Encourage bicycling and walking as alternatives to driving, consistent with Complete Streets concepts.

5.7-I-7 Continue to implement accessibility standards for seniors and physically disabled persons within the public rights-of-way.

5.7-I-9 Implement roadway improvement projects to minimize both temporary and permanent reductions in bicycle and pedestrian mobility and/or accessibility.

5.7-I-10 Work with neighboring jurisdictions to ensure that continuity in bicycle and pedestrian networks is provided at jurisdictional boundaries.

5.7-I-11 Work with Caltrans and other appropriate agencies to improve bicycle and pedestrian mobility at freeway crossings.

5.7-I-12 Promote educational efforts about traffic laws and safe practices for all modes of transportation.

The above goals are intended to result in roadway designs that safely accommodate all users, including emergency vehicles. Therefore, this impact would be **less than significant.**

Mitigation Measure: None required.

1.4 References

Association of Bay Area Governments and Metropolitan Planning Commission. 2022. *Plan Bay Area 2050*. Available online: https://www.planbayarea.org/. Accessed June 6, 2022.

Bay Area Rapid Transit. 2022. *Stations.* Available online: https://www.bart.gov/stations/orin. Accessed June 6, 2022.

California Air Resources Board. 2018. *California's Sustainable Communities and Climate Protection Act: 2018 Progress Report*. Available online: https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_02_Report.pdf
Accessed June 6, 2022.

California Governor's Office of Planning and Research (OPR), 2018. *Technical Advisory on Evaluating Transportation Impacts in California*. 2018. Available online: https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. Accessed June 6, 2022.

Caltrans. 2020a. *Transportation Analysis Framework, First Edition: Evaluating Transportation Impacts of State Highway System Projects*. Available online: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-09-10-1st-edition-taf-fnl-a11y.pdf. Accessed June 6, 2022.

Caltrans. 2020b. *Transportation Analysis Under CEQA, First Edition: Evaluating Transportation Impacts of State Highway System Projects*. Available online: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-09-10-1st-edition-tac-fnl-a11y.pdf. Accessed June 6, 2022.

Contra Costa County Transportation Authority. 2021. *Contra Costa Transportation Authority Growth Management Program Implementation Guide.* Available online: https://ccta.net/wp-content/uploads/2021/08/GMP_Implementation_Guide_FINAL_ 02172021.pdf.
Accessed June 6, 2022.

County Connection. 2021. *Route 6 – Lafayette/San Ramon/Orinda.* Available online: https://countyconnection.com/routes/6/. Accessed June 6, 2022.

City of San Ramon. 2002. *General Plan.* Available online: https://www.San Ramon.ca.us/DocumentCenter/View/174/Town-of-San Ramon-General-Plan-PDF?bidId=.
Accessed June 6, 2022.

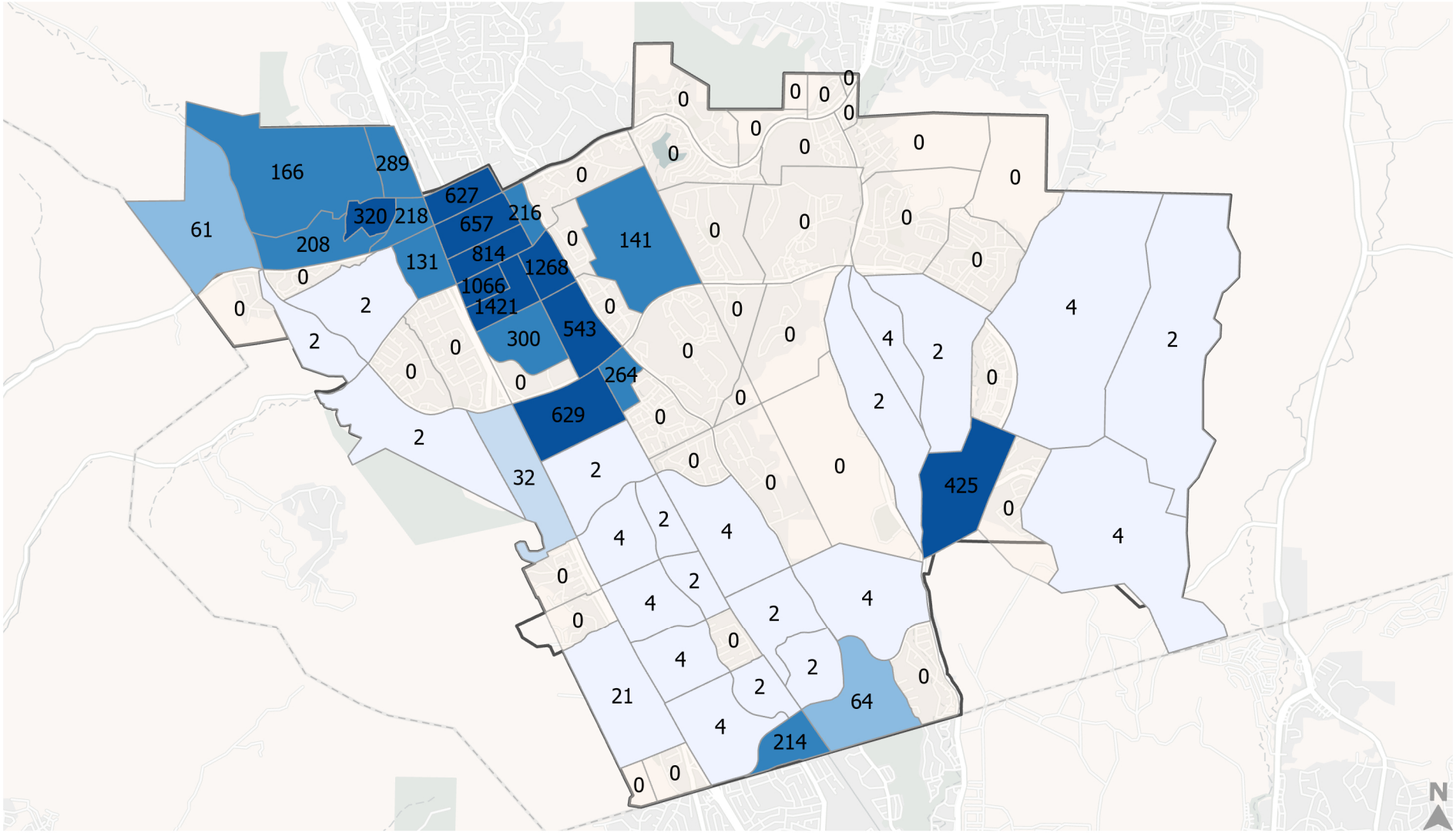
City of San Ramon. 2021. *City of San Ramon Capital Improvement Program, Fiscal Years 2021-22.* Available online: https://www.San Ramon.ca.us/ArchiveCenter/ViewFile/Item/166 .
Accessed June 6, 2022.

City of San Ramon. 2016. *Walk Bike Plan.* Available online: https://www.San Ramon.ca.us/195/San Ramon-Walk-Bike-Plan.
Accessed June 6, 2022.

Appendix A: Housing Units by TAZ

Appendix A: Housing Unit Growth by Traffic Analysis Zone

TAZ	Housing Element	Pipeline Projects and ADUs	Specific Plan Additions	Total
40140	568	-	700	1,268
40095	87	-	540	627
40098	574	-	240	814
40055	-	-	-	-
40091	226	63	-	289
40092	263	57	-	320
40093	208	-	-	208
40094	49	169	-	218
40096	216	-	-	216
40097	657	-	-	657
40099	131	-	-	131
40100	-	-	-	-
40101	-	2	-	2
40102	-	2	-	2
40103	-	2	-	2
40104	-	-	-	-
40105	-	-	-	-
40106	1,017	404	-	1,421
40107	-	300	-	300
40108	-	-	-	-
40109	-	629	-	629
40110	28	4	-	32
40111	-	2	-	2
40112	-	-	-	-
40113	-	4	-	4
40114	-	2	-	2
40115	-	2	-	2
40116	-	4	-	4
40117	-	4	-	4
40118	-	-	-	-
40119	21	-	-	21
40120	-	-	-	-
40121	-	4	-	4
40122	-	4	-	4
40123	-	-	-	-
40124	-	2	-	2
40125	91	123	-	214
40126	64	-	-	64
40127	-	-	-	-
40128	-	4	-	4
40129	-	2	-	2
40130	-	2	-	2
40131	-	-	-	-
40132	-	-	-	-
40133	-	-	-	-
40134	-	-	-	-
40135	264	-	-	264
40136	-	543	-	543
40137	-	-	-	-
40138	139	2	-	141
40139	-	-	-	-
40141	-	-	-	-
40142	-	-	-	-
40143	-	-	-	-
40144	-	-	-	-
40145	-	-	-	-
40146	-	-	-	-
40147	-	-	-	-
40148	-	-	-	-
40149	-	-	-	-
40171	-	166	-	166
40172	-	61	-	61
40173	-	-	-	-
40177	-	-	-	-
40178	-	-	-	-
40179	-	-	-	-
40180	-	-	-	-
40181	-	-	-	-
40182	-	-	-	-
40183	-	-	-	-
40184	-	2	-	2
40185	-	4	-	4
40186	-	-	-	-
40187	-	-	-	-
40188	-	-	-	-
40189	-	2	-	2
40190	-	-	-	-
40191	240	185	-	425
40192	-	-	-	-
40193	-	4	-	4
40196	-	4	-	4
40197	-	2	-	2
40603	1,066	-	-	1,066
	5,909	2,766	1,480	10,155



Change in Dwelling Units

- 0
- 1 - 25
- 26 - 50
- 51 - 100
- 101 - 300
- 301 - 1,500

San Ramon City Limit

2040 Final Project Description Change in Dwelling Units by TAZ

Change in Dwelling Unit data incorporates the San Ramon Housing Element, Pipeline Projects and ADUs, and Specific Plan adjustments.